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E. C. ROBERTS, Esq., Agent Minnesota Mining Co.

Dear Sir.—The lot of mineral land I surveyed the last week under your directions for the Peninsula Mining Company, is in the south-west corner of the tract held by the Minnesota company, and about a mile and a half in a straight line from the nearest point of the Ontonagon River. Its south boundary is the south line of sections fifteen and sixteen, which line separates the Minnesota tract from that of the Ontonagon company. The north and south line between these sections passes through the middle of the lot—this extending along it ninety rods, and on each side from the line, forty rods. The contents of the tract are therefore forty-five acres.

In the north-west corner a brook flows through in a westerly direction towards the river; and it is understood that the privileges of this brook, extending beyond the limits of the lot, are to be appropriated to the use of the Peninsula company, to afford them all required convenience for washing and preparing ore.

From this brook towards the south, the surface rapidly rises to the summit of one of the three or four parallel ridges of the trap range. On the north side of the stream is another of these ridges, almost precisely similar, on which are found the veins of copper worked by the Minnesota company. They are peculiar for their straight direction, their narrow summits, their precipitous southern face of trap-rock, and their more gently descending northern slopes, covered with a fine growth of maple, birch, hemlock, bass-wood, fir, &c. Their elevation is from three to five hundred feet above the bottom lands; and their summits, except when broken by occasional gaps, are nearly level. Along these narrow summits are very frequently found lines of ancient pits, once sunk upon veins of copper, the position of which they now serve to designate. These ancient excavations are represented on the accompanying map by dotted lines.

The southern line of the lot lies mostly just along the base of the precipice on the south side of the ridge. It ascends the cliff only near the southwest corner of the lot, and this corner is almost directly upon the summit. The course of the ridge being about east 24° north, it is found quite across the tract for its entire length of eighty rods. A little west of the centre line, it is broken by one of the gaps common to these ridges; and in this gap is found a vein containing copper, which is frequently the case in similar positions. This vein, called a cross-vein (from its course being nearly across that of most of the veins of the country) has been opened but partially in this place. What appears however to be its continuation on the north slope of the ridge, not far from twenty rods distant, has been more thoroughly explored by sinking in the rock. Here a vein was discovered by re-opening an ancient pit, which presented, even at the surface, little masses and sheets of copper. It lay nearly vertically in the rock, and its direction seemed to be

north 54° west, south 54° east. As the ancient pit was deepened the copper increased in quantity and size of lumps. From the surface down to the depth of thirteen feet, it furnished, I am informed, copper enough to pay for the work done—a very unusual thing in these veins. The water standing seven feet deep in the shaft, I could not examine it thoroughly. A mass of copper, however, is seen standing straight up in the water, and evidently fixed in the vein beneath. It is very rare to find anything so promising as this so near the surface; and in connection with the favorable position of the vein for working, and the certainty of finding other veins along the summit of the ridge, the locality cannot but be regarded as highly valuable, and fully warranting the immediate commencement of mining operations on a liberal scale. The slope of the hill below the shaft is such, that within two hundred feet an adit level could be driven up on the vein full one hundred feet, I think, lower down; thus affording, at little expense, an entrance into the vein, and assuring its drainage, to the depth of two hundred feet and more below the summit of the ridge. By continuing this adit—working always on the cross-veins,—the other veins would finally be cut at a low level also, whose out-crop is seen in the ancient pits along the summit. These pits have been partially cleared out at a few points, and veins are exposed (at least two) containing native copper, and of very promising appearance. Their inclination downwards is towards the north, at a steep angle. The deeper they get, the further they enter the tract set off for the Peninsula company and portions of the veins, which at the surface are south of its boundary, must cross the line below. The extent of the veins on the lot is sufficient for the operations of one company for more than a generation, even if worked as extensively as their external appearance seems now to warrant.

The brook will be valuable for washing ores, and may possibly afford some water power near the lines of the lot. The nearest road to the river will be down its valley, and will not probably exceed two miles in length—most, if not all the way, being a down-grade. This is as near navigable water as any mines in the Lake Superior region are situated—a very important point to be considered in estimating the value of mining localities, to some of which the transportation of supplies and products constitutes one of the principal items of expense.—Very respectfully, I am yours, &c.,

JAMES T. HODGE,
Geologist and Surveyor.
MINESOTA MINES, August 8, 1850.

Similar favorable reports being received from several of the directors of the Minnesota company, who visited the mines during the summer, the lot was finally purchased, together with one hundred and fifteen acres of agricultural land adjoining it, and preparations for mining were made in Novem-

American Railroad Journal.

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Saturday, June 7, 1851.

Lake Superior Copper Mines.

Peninsula Mine.—One of the new companies chartered the last year by the Legislature of Michigan, was named the Peninsula Mining Company, it was organized in New York city, its members for the most part being the same as those of the Minnesota Mining Company. Their object was to purchase a track on the Minnesota location, and work the mine under a separate organization; for this purpose a lot of forty-five acres was set off a little more than half a mile south of the Minnesota mine, the location of which may be seen on the map of this mine published in the *Railroad Journal*, December 1st, 1849; it is in the southwest corner of section fifteen, and south-east corner of section sixteen. In August last, the writer was employed by E. C. Roberts, Esq., agent of the Minnesota mine, to survey this lot, which he did, and presented a report, of which the following is a copy:—

ber following. So flattering was the appearance of the vein, that an offer was received to sink the shaft eighty feet below the old workings, for the copper that might be found; but this offer was not accepted. The accounts subsequently sent on correspond to the most sanguine anticipations of those interested. From eight to ten tons of copper are estimated to be now upon the surface, the result of the work of six men from the first of December to first May. In consequence of the abundance of copper in the vein, the work has been retarded, so that the miners have reached the depth of only sixty feet from the point where they commenced. Arrangements are now in progress for increasing the force upon the mine, and prosecuting the work with all despatch. No mining enterprise has been commenced under such favorable auspices as this, none with so small expenditure of money has produced such a result; and no locality is more advantageously situated for the development of its resources with so little outlay for general expenses. We trust soon to hear that the title to the lands held by the Minnesota company under lease from the general government, has been ratified and perfected, the money having been deposited according to law for this purpose at the Land Office at Sault Ste. Marie.

H.

Massachusetts Free Bank Law.

The provisions of the Massachusetts Free Banking Bill, in its amended shape, and which has become a law, are as follows:

Sec. 1. Any number of persons, not less than fifty, may become a body corporate for banking purposes, subject to all the duties, liabilities and restrictions to which the existing banks are now liable. The stock not to be less than \$100,000, nor more than \$1,000,000.

2. The stock of banks hereby authorised by this law shall be divided into shares of \$100. One-half the capital must be paid before the commencement of operations, and the whole within one year thereafter.

3. Before the commencement of operations, a certificate shall be filed in the office of the Secretary of the Commonwealth, signed by the President and Directors, stating:—1. The corporate name of the bank. 2. The name of town or city where located. 3. The amount of its capital stock. 4. The names and residence of the stockholders and the number of shares held by each. 5. When the bank is to go into operation. No bank to assume the name of any pre-existing bank.

4. The capital stock may be increased at a subsequent date, by a vote of a majority of the stockholders; the same proceedings shall be had as in the first instance.

5. Such bank shall carry on the business of banking at its own banking house, but not elsewhere, and may pay dividends semi-annually. If any bank neglect to carry on the business of banking, a forfeiture of privileges shall follow.

6. The Auditor of State is authorised and required to procure the engraving and printing of circulating notes, of such denominations as previously allowed—all such notes to be registered, numbered and countersigned by the Auditor, before delivery.

7. Banks authorised by this law may transfer to the Auditor, at a rate not above its par value nor above its market value, any public stock issued by any city or town in this commonwealth; or by either of the New England states; the state of New York or by the United States; and receive therefor an equal amount of circulating notes.

8. The Auditor is authorised to exchange any such stocks for others deposited by the bank, provided the security to be equally good; and the amount of circulation not reduced below fifty thousand dollars.

9. The Auditor is authorised to deliver to bankers under this act, powers of attorney to receive interest or dividends on their stocks held by him.—Such power to be revoked whenever occasion may require it.

10. Such bank is authorised to loan and circulate such notes according to the ordinary course of banking.

11. In case of failure to pay such notes on presentation, they may be protested; and if not redeemed within ten days after notice, the Auditor is authorised to give public notice thereof, and that they will be redeemed out of trust funds in his hands.

12. Banks established under this law are restricted in the amount of circulation to the same limit as the old institutions, viz: twenty-five per cent. beyond their capital.

13. All plates, dies and materials for printing such circulating notes, to remain in the custody of the Auditor of State.

14. The Auditor to be liable to a fine of five thousand dollars and imprisonment not less than five years, if he permit circulating notes to be issued to any bank beyond its collateral stocks.

15. Each bank established under this act, shall, in addition to the ordinary returns required by law, specify the stocks deposited with the Comptroller for its circulation.

16. The Secretary of the Commonwealth is authorised to prepare separate abstracts for the banks established under this act.

17. The Bank Commissioners shall have the same power over the banks established by this act as over chartered banks; and they are required to examine the certificates of stock held by the Auditor in trust for such banks.

18. Whenever any Free Bank shall return to the Auditor ninety per cent of the bank notes received from him, and shall deposit funds for the balance, the Auditor may return to this bank all stocks previously received from it.

19. Free banks that relinquish business must give six years notice that "their circulating notes must be presented to the Auditor for payment within six years after the issuing of such notice."

20. The Justices of the Supreme Court are authorised to adopt proceedings against Free Banks, similar to those against Chartered Banks, whenever the court may deem it necessary.

21. Whenever any bank shall be placed in the hands of agents or receivers for liquidation, by the Supreme Judicial Court, the Auditor shall transfer to such agent all stocks or moneys held by him in trust for such bank.

22. This act may be amended or repealed at the pleasure of the Legislature.

North Carolina Coal.

We have examined a report recently made by Professor Walter R. Johnson on the subject of a coal formation in the interior of North Carolina. It has been known for a great length of time that coal existed in Chatham and Moore counties, but to what extent has not been so well understood until quite lately.

This coal is located on Deep river, some 45 miles above Fayetteville, and appears to be in the shape of a great basin, extending along said river for several miles. Indeed, the river seems to run directly through the formation, as appears by the maps, etc., of Prof. Johnson.

The Rocky river and the Hawe river join Deep river in the vicinity of Haywood, and from this point it takes its name as Cape Fear river, which passes Fayetteville, Wilmington, etc., and empties into the Atlantic ocean at Smithville.

The Cape Fear river is already navigated by steamboats, and other vessels, as far up as Fayetteville.

The State of North Carolina, and a company formed in that State, are making this river, and Deep river, navigable, with locks and dams (same as the Oswego canal) to a point up to and beyond the coal fields, the cost of which is but \$200,000, and will afford the cheapest internal navigation in the United States.

This navigation is to be completed on or before the first day of January next, and, we understand, there is a company formed (part of whom belong in this city) with a proper charter, who are making preparations to engage in that trade as soon as navigation will permit. We also understand that miners, under the direction of a competent engineer, have already gone on to open the mines, and prepare for active business; and judging from the

character and ability of the men who are engaged in this enterprise, there can be no doubt of their success, for they are gentlemen who carry out what they undertake, and do not jump at conclusions.

Coal is one of the greatest sources of wealth to Great Britain, and next to iron is their most permanent reliance. In the United States it is becoming a vast trade, and the demand, especially for bituminous, is continually greater than the supply. Twelve thousand cargoes of this commodity were shipped from Philadelphia last season, which shows a rapid increased demand over prior years; and, unless Prof. Johnson is largely mistaken—which is not very likely, as he stands at the head of the geological profession, and there can be no better authority—this deposit of bituminous coal is likely to prove invaluable, not only as a fuel, but to the owners of the mine, the quality being unquestionable, while its cost, delivered in New York, is much less than any other coal of the same character.—*Albany Evening Journal*.

Wickersham's Weaving Wire.

Strange as the idea may seem, it is no less strange than true, that iron of a thickness that would make it appear impossible that it could be worked by any other agency than the forge, the anvil and the hammer, is now, by the aid of new and powerful machinery, woven into the most beautiful patterns, and the designs varied with almost the same facility as in the weaving of a carpet or table cover.—The specimens that we have seen excel in beauty and finish any iron railing that we have seen, and do not cost more than half the ordinary cost of even cast iron railing. Many of the first class counting houses and offices in New York are now fitted up with railing in preference to any other heretofore or at present in use.

The uses of the invention are not confined to railing, as the most tasteful verandahs, window gratings, garden fences, etc., are made by it. The coal miners of Pennsylvania prefer it above all other modes for their screens.—Charleston and New Orleans each have parks enclosed by it, and many of the rich southerners have their flower conservatories enclosed in the same manner. In fact wherever it has been introduced, it has come into almost unlimited favor. The peculiar advantages it possesses over all other kinds of railing is, that in its manufacture the rod or wire is so crimped, that in the weaving process, they are crossed in a manner that one binds the other, thus giving a mutual support to the whole, that renders it more durable than work twenty times its weight made in the old way.

Mr. John Wickersham, the ingenious inventor, also manufactures a superior article of iron wire for farm fences, that cost but little, will last a man a lifetime, and are easily constructed. In thinly wooded countries they will come into rapid demand as they already are in many parts of Europe. Add to these one more article. Mr. Wickersham manufactures a bedstead of iron, so constructed that it can be shut up during the day time, and will require but a few inches of room from the wall out, is bug proof, and easily managed. We think this store is worth a visit to those who visit New York.—*Albany State Register*.

Silver Mine in Virginia.

A valuable silver mine, it is supposed, has been discovered on the farm of Jefferson county, Va., situated on the east bank of the Shenandoah River, and at the base of the Blue Ridge mountain. The Spirit of Jefferson says:—The mine was discovered some months since, and a small specimen obtained and forwarded to the Philadelphia Mint to be assayed. The superintendent of the mint has returned the same, made into a ten cent piece, and pronounces the ore exceedingly rich. The ledge of rocks in which the ore is impregnated, is of immense size, and if the ore yet to be taken out should prove as rich as that already tested, it will rank as among the most productive silver mines of the country. Every three pounds of rock, it is estimated, will yield one in silver. Arrangements have been made for at once mining, and but a very short time will demonstrate the advantages of the discovery.

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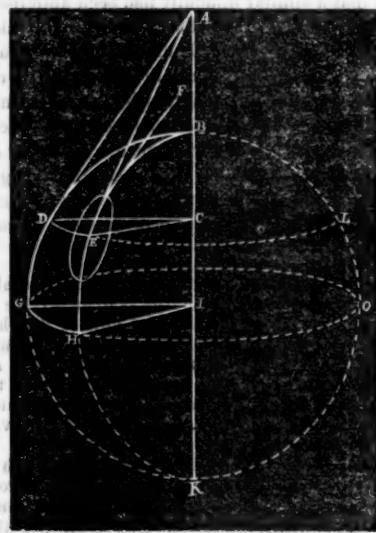
In the great experiment of Foucault, the motion of the pendulum at the pole is not difficult to conceive. The plane in which oscillation takes place, not revolving with the earth in its motion from east to west, the pendulum will, at each returning sweep, approach an observer from a new point; or in other words, the plane of oscillation will revolve, and in twenty-four hours will have accomplished a revolution around the earth's axis.

The motion of the pendulum at the equator is easily presented. By the law of inertia, the absolute direction of the plane of oscillation will be, throughout the revolution of the earth, that in which the motion of the pendulum commenced. If it coincide with the equator, at the outset, it will continue to do so. If it be at right angles to the equator, the same rule will apply. Any given direction will be maintained till the pendulum comes to rest. The plane of oscillation will not revolve around its own vertical.

The motion of the pendulum, at a point between the pole and the equator, is less easily explained.

It is influenced by so many varying conditions that a strictly true mechanical conception of it may be impossible. As yet, the more gifted mathematicians have not attempted to present it in a detailed form, suited to the general comprehension.—While we wait for their patient and more thorough investigation, it may not be unwise to avail ourselves of such illustrations as may be approximately correct, and possibly prepare for more profound and accurate views when they shall be offered.

With these considerations the following is submitted:—



The accompanying diagram represents the earth. AK is its axis; GH its equator, and D E L the meridian of latitude of Boston. BDG and BEH are the two meridians of longitude fifteen degrees apart, and DA and EA are tangents to these meridians, at the points D and E.

A pendulum at the pole making its first oscillation in the meridian BEH at the end of an hour, would vibrate in the meridian BDG. The plane of oscillation would in this time have swept over 15 degrees—the 24th part of 360 degrees; an angle equal to DCE, which measures the inclination of the two meridians to each other.

A pendulum at D, in the latitude of Boston, for example, oscillating in the meridian GDB, at the end of an hour would have moved with the earth in its revolution to E; but preserving the original direction of its oscillation, it would not vibrate in the meridian HEH but in the direction EF parallel to DA.* This direction makes with the tangent

the meridian the angle AEF—the portion of 360 degrees through which the plane of oscillation revolves in the latitude of Boston in an hour. 360 degrees divided by this angle will give the number of hours required for a complete revolution. If the angle be less than 15 degrees, the revolution of the plane of oscillation will require more than twenty-four hours.

Now although not strictly true, the three lines A E, A D and F E, may be regarded as lying in the same plane, and the angle DAE as being therefore equal to its alternate angle AEF. But the angle DAE is less than the angle DCE, because of the triangles DAE and DCE having the same base, DAE has the greater altitude. AEF being equal to DAE, AEF is less than DCE. But DCE is fifteen degrees, the inclination of the two meridians to each other. Three hundred and sixty divided by this quantity, which is less than fifteen, will give a quotient greater than twenty-four.

The lower the latitude, that is, the nearer the line DE is to the equator, the less will be the angle DAE and of course the angle AEF, and the greater will be the quotient arising from the division of 360 by this angle. At the equator where the tangents to the meridian no longer converge but are parallel, the angle will be reduced to zero, and the quotient become infinity.

The path of the pendulum in latitudes between the pole and the equator may be thus illustrated:

Upon a globe a foot or more in diameter, having upon it the hour parallels, small circular discs having a straight dark line through the centre (gum-tickets such as are used for price-marking by merchants answer the purpose well) may be attached in the following manner:

In the latitude of Boston, for example, attach the first ticket with the straight line north and south. This line will represent the sensible path of a pendulum made to vibrate north and south in this latitude. Place the second ticket upon the next meridian eastward, the line upon it being parallel to that on the first ticket. This line will represent the sensible path of the pendulum at the end of the first hour's vibration. The third ticket is to be placed on the third meridian, its line being parallel to that on the second, and so on around the globe, the straight line on each succeeding ticket being parallel to that on its predecessor. The straight lines will give the path of the pendulum as it passes each succeeding meridian.

It will be observed on attaching the 24th ticket, that the line which represents the path of the pendulum at the commencement of the 24th hour of its vibration, is not parallel to that on the first ticket. The line will not have completed a revolution around its centre. Now with a pencil continue the parallel lines across the tickets already attached, each succeeding line being, as before, parallel to its predecessor, and it will be found that about twelve of the tickets, an hour apart, will have been crossed, before a north and south line will be drawn. In other words, it will appear that about thirty-six hours are required in this latitude for the plane of oscillation to complete a revolution about its own axis.

A large orange and wafers, crossed by straight pencil mark, may be substituted for the globe and gum-tickets, and the general illustration very well given.

E. N. H.

Cambridge, May 23d, 1851.

Railroad from Harrisburgh to Elmira.

The completion of the Erie railroad has turned the attention of the people of Baltimore, and of the interior of Pennsylvania, to the subject of a railroad communication between the above named places, by following up the valley of the Susquehanna. Baltimore is directly south of Elmira, and can be connected with the latter by an almost straight road. A line of railroad is already in operation from that city to Harrisburgh, a distance of eighty-three miles. From Harrisburgh to Elmira the distance is 161 miles. From Williamsport to Elmira, a distance of 74 miles, a road we understand is under contract, leaving but 87 miles to be provided for to form a continuous line from Baltimore to Buffalo.

To promote the construction of the above link, a convention was recently held in Sunbury, Penn., which was numerously attended by delegates from Baltimore, and from the counties of Lycoming, Union, Dauphin, Schuylkill and other portions of the Susquehanna Valley. The proceedings of the meeting were characterized with a spirit which showed determination to open this great line at the earliest moment. The following are the resolutions adopted:—

"Resolved,—That the proposed railway communication between the northern terminus of the York and Cumberland railroad, connecting, as it does, with the great Pennsylvania railroad, the Dauphin and Susquehanna, the Trevorton and Mahonoy, and the Shamokin and Sunbury, and extending to the New York and Erie railroad, is a project of great national as well as local importance.

"Resolved,—That in the opinion of this convention, the agricultural and mineral products of the valley of the Susquehanna, will throw upon the proposed railway, a tonnage which will yield more than a full return for the amount of capital required for its completion, while the immense trade and travel between the Lakes and the Gulf, must make it one of the greatest thoroughfares in the United States.

"Resolved,—That it is essential to the immense trade, and especially the coal and iron trade, from the Valley of the Susquehanna to the great Lakes on the north, and the Chesapeake on the south, that the railway to be constructed to connect these extreme points, should be of the uniform Pennsylvania and Maryland gauge; and that the companies, whose roads will form this great line of railway, be earnestly requested to build their improvements to conform to that gauge, and that a committee of five be appointed to confer with the several companies on this subject.

"Resolved,—That an Executive Committee, to consist of fifty-six persons, be appointed to assist in the furtherance of the objects of this convention."

The Baltimore delegation on its return home, submitted to the people of that city a long and interesting report of the doings and objects of the convention, a portion of which we give below. The city of New York having completed the Erie road, Baltimore and Philadelphia now step forward and claim that it may be made a highway for each, to the west. Whether the supremacy of New York can ever be disturbed by the efforts of her rivals, may be well doubted; but each city must have its share of trade, and we have no doubt that the proposed connection would add largely to the business of Baltimore, and would become a great route of travel between the north and the south. The object which is proposed to be accomplished is fully set out in the annexed extract:

It will be found upon an examination of the facts to which we invite attention, that Baltimore has been very suddenly—within the short space of the last year or two, almost unconsciously to herself—placed in a position of singularly advantageous relationship to this Valley of the Susquehanna; that circumstances, over which she has exercised no control, and towards which she has not even contributed in any manner whatever, are now in a progress of full development, which, with her assistance hereafter, must render her the nearest and most convenient depot to the trade of the largest commercial circle that is connected with any city in the Union.—These facts may be now read on the face of the map of the United States.

That map will show us, that the city of Baltimore is the nearest sea-port to the country watered by the Susquehanna and its tributaries;—the most accessible, whether by land or water. Situated near the head of the Chesapeake Bay, a navigation of four hours opens to it the mouth of this great river. A land carriage of three hours and a half, easily accomplished on a line of railroad, equal to any in the United States, as the undersigned have experienced, places the traveller from Baltimore in the most busy, populous and productive portion of

* Strictly speaking the direction at the second meridian is not absolutely the initial direction. The straight lines may nevertheless be regarded as giving the sensibly correct path of the pendulum.

the Valley. This is accomplished in a journey of eighty-three miles to Harrisburg.

At the distance of one hundred and sixty-one miles from this point, the Erie railroad—the last and most extensive work of the state of New York—intersects the line of the valley at the town of Elmira. If, therefore, we add the eighty-three miles to Harrisburg to the one hundred and sixty-one from that point to Elmira, we have two hundred and twenty-four miles as the distance from Baltimore to the most convenient intersection of this recent great improvement in New York.

The Erie railroad, including twenty-five miles of navigation on the Hudson, reaches Dunkirk on Lake Erie at the distance of four hundred and sixty-seven miles from New York. Elmira is situated two hundred and eighty-three miles from the same city, and one hundred and eighty-four from Dunkirk. The distance, therefore, from Baltimore to Dunkirk, by way of Elmira, (being two hundred and forty-four miles added to one hundred and eighteen,) is four hundred and twenty-eight miles, and our city is consequently thirty-nine miles nearer to Dunkirk than the city of New York by its recently constructed Erie Railroad.

The citizens of Buffalo have lately engaged in the construction of a railroad to connect that place with the Erie road. This work is now hastening towards completion under an active and efficient management. It is laid off to intersect the Erie road at the town of Hornellsville, which is fifty-nine miles west of Elmira. The distance from Hornellsville to Buffalo is ninety miles, and from Elmira to Buffalo one hundred and forty-nine miles. Buffalo, therefore, by this route, is three hundred and ninety-three miles from Baltimore, and four hundred and thirty-two from New York.

The distance from New York to Buffalo, by the Albany route, is four hundred and seventy-eight miles, having one hundred and fifty miles of water carriage on the Hudson river, and three hundred and twenty-eight miles on the railroad; thus making a difference of eighty-five miles in favor of the city of Baltimore.

The Chemung railroad runs due north from Elmira to the Seneca Lake, at Jefferson, twenty-one miles, whence there is a steamboat communication to Geneva within three hundred and five miles of Baltimore.

The great object which may be expected at present to occupy the attention of this city, is a consideration of the means of completing the connexion between the northern terminus of the York and Cumberland road to Elmira. We turn, therefore, to what is done, and what is proposed to be done in regard to this enterprise.

From Elmira to Williamsport, on the Susquehanna, is seventy-four miles. A company is now at work in the construction of the best railroad that can be built between these two points. We understand that a contract has been made to complete it in the next two years; and as it is now in a course of industrious prosecution, there is little room to doubt that it will very soon be brought into full operation. This leaves, as the only link to be provided for, the space between Harrisburg and Williamsport, to which the charter recently granted by the Legislature of Pennsylvania applies, and in pursuance of which charter it was the object of the convention at Sunbury to organize a company and commence the work. The whole extent of the road embraced by this charter, is about eighty-seven miles, commencing at the northern terminus of the York and Cumberland road, and ending at Williamsport. The track, throughout its entire course, will occupy the margin of the river, which is singularly well adapted to a level, cheap, and easily constructed road. The first division of this road will reach from the York and Cumberland road to Sunbury, about forty seven miles; the second will extend from Sunbury to Williamsport, a distance of about forty miles.

The citizens of Baltimore are invited and expected to unite with the inhabitants of that portion of the State of Pennsylvania which is interested in the work, in the construction of this first division to Sunbury. We are sure that the second division, from Sunbury to Williamsport, will be taken in charge by those who reside in the region, and will be effectually prosecuted by them to its completion. So far, therefore, as Baltimore is invoked to this

task, the whole enterprise is confined to the first division. It is supposed that the entire amount required for the completion of this division, will not exceed \$12,000,000. This amount, or whatever may be the cost, will be derived from subscriptions to the stock, to which, we are informed, liberal contributions will be made by the towns, the various mining companies, and the inhabitants interested in the construction of the road. It is particularly to be noticed that this division, in its short progress to Sunbury, will intersect, and most probably pass through, the depots of four lateral railroads, connected with as many of the most valuable coal mines of Pennsylvania. The Dauphin, the Lykens Valley, the Trevorton and the Shamokin coal mines are familiar to our population, as amongst the best in the country; and it is a most satisfactory and encouraging fact, that the projected road will, in the space of forty miles, receive the tribute of the trade and business connections of each of these establishments in succession. How far such a relation of these mines alone would justify the enterprise in hand, we leave without comment to the judgment and experience of our fellow citizens. The coincidence of such a resource, so conveniently adapted to the trade of the proposed road, may warrant the expectation that Baltimore may become as large a coal market as any other in the Union.

NEW YORK.

Mohawk Valley Railroad.—We have received a copy of the report of the survey, and estimate of cost, of the above road.

The proposed line is to extend from Schenectady to Utica, a distance of 78 miles. The surveys were made under the direction of E. H. Brodhead, Esq., Chief Engineer, assisted by W. B. Brinsmade and S. Whipple, Engineers.

The following is a general summary of the cost of the road.

Grading, masonry and bridging of the eastern division, extending from Schenectady to Canajoharie, 38 miles.....	\$470,959 97
Extending from Canajoharie to Utica, 40·3 miles.....	440,047 65
Superstructure for 81 miles, which includes the necessary turnouts, tracks in depot buildings, etc., at \$7,500 per mile.....	607,500 00
Land and damage.....	240,000 00
Fence, at the rate of \$700 per mile.....	54,600 00
Station buildings and water stations.....	50,000 00
Equipment.....	203,000 00
Engineering and superintendence.....	60,000 10

Total cost of the road graded complete for a double track, with a single track, and the necessary turnouts laid.....	2,126,107 62
Add for a second track superstructure.....	580,000 00

Total cost of the road complete, with a double track superstructure.....	2,706,107 62
If we adopt the line on the north side of the canal, from a point, 1·10 miles east of Schoharie to the "Big Nose," the cost will be reduced by.....	26,742 00

Making the total cost, with double track.....	2,679,365 62
If a single track were laid down in the first place, it would not be necessary to put on the gravel for the second track, until the company were ready to lay it down, this would reduce the first cost of a single track as follows: The cost of a single, with grading for a double track, as above.....	2,126,107 62

Deduct for graveling for a second track, included in the above estimates for grading.....	99,286 00
Total.....	\$2,026,821 62

The grades of the line are favorable; in no case exceeding 21·12 feet to the mile. The maximum

grade is encountered for only 6½ miles. For thirty miles, the road will be level, and most of the grades are less than 16 feet per mile.

The whole cost of the road with a double track, is estimated at \$26,000 to the mile. This estimate compares favorably with the cost of most of our northern roads.

The line will probably occupy the south bank of the Mohawk for its whole distance. Assuming the estimates to be correct, the route must be a favorable one. Its general characteristics will be readily seen by a person travelling upon the opposite bank of the river.

The first obstacle of a serious nature met with, is Flint Hill, which, to copy from the report of the Engineer, is a "ledge of rocks running parallel with the canal for about one-fourth of a mile, its surface is about 32 feet above the water in the canal, and above the grade of the road about 22 feet at the highest point. The direction of the ledge being very straight, and being exactly in the course the line must pursue, enables us to run the line so as greatly to reduce the *through cutting*, simply requiring a step as it were in the face of the rock, to receive the road. The whole quantity of rock to be excavated is 35,000 cubic yards."

The second obstacle of magnitude is at "Yankey Hill." As the navigation of the canal at this point has frequently been interrupted by slides from the high bank on its southern side, the Engineer states that a similar difficulty had been anticipated with railroads. Mr. Brodhead states that the slides have been caused by the bank not having a sufficient slope; that by grades, the deep cutting can be avoided on the railroad, which was indispensable on the canal, and that consequently the difficulties here can be easily surmounted. No other obstacle, says the report, of any considerable magnitude, occurs till the line reaches the *rock* at Little Falls. In relation to this part of the line we copy as follows:

"From Fink's Basin to the lower lock at the falls, a distance of 4,200 feet, the line is upon a table or terrace in the rocky slope of the valley, which is of sufficient width for the road, and is well situated, both as to the grade and line of the road, requiring, as may be seen by the inspection of the profile, very little excavation of rock or embankment to form the road bed. This terrace is elevated about 18 feet above the water in the canal.

From the lower to the upper lock, the length is 2,400 feet, of which 1,800 feet is principally rock excavation, and the balance, 600 feet, is embankment. This comprises all the line at Little Falls. Of the 1,800 feet, one half is a thorough cut, averaging 40 feet in height, and the other half is mainly side excavation, which will cost about two-thirds as much as the former. In curving around at the falls, we have adopted for the estimates, a radius of 1,500 feet, which, as I have already stated, is the smallest upon the line. If for a portion of the distance a curve of 1,000 feet radius should be adopted, it would reduce the cost \$11,675. On the opposite side of the valley, the Utica and Schenectady road has a curve of 720 feet radius, combined with a grade of 24 feet to the mile; while the curve of 1,500 feet radius which we have adopted, is mostly upon a level grade."

Assuming, therefore, the correctness of the estimates, there can be no objection to the road on the ground of its cost. The more important question is, will it pay? for if built, it must come into direct competition with a parallel road for travel, and the canal for freight.

We all know that the Mohawk valley is the key to the commerce of this country, and that the railroad from Albany to Buffalo is the greatest route for passenger travel to be found in the United

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States. In reference to the travel over this route, we copy the following particulars from the report, showing the income of the Utica and Schenectady since that road was built:

The Utica and Schenectady railroad was put in operation in August, 1836; from that time to the close of 1840, four years and five months, the receipts of the road, from passengers and U. S. mail amounted to.....	\$1,567,062
From 1841 to 1845, both inclusive, five years, the receipts from passengers and mail, and \$51,171 received for carrying freight, amounted to.....	1,773,578
From 1846 to 1850, five years, from passengers and mail.....	\$2,583,626
Freight.....	931,780
	<hr/> 3,515,406

Total receipts	\$6,856,046
Expenditures for the same period	2,637,842

Excess of earnings over current expenses in about fourteen years..... \$4,218,204

This road, 78 miles in length, was constructed and put in operation for a million and a half of dollars. Since its commencement a double track has been laid, so that in starting an account between the instalments paid to the company, and the dividends paid by the company to the stockholders, and computing the interest on the payments, on each side, at seven per cent per annum, up to February 1, 1851, and including the dividend made on that day, the result is as follows, viz:

Amount of instalments paid in.....	\$4,124,000 00
Interest on same to February 1, 1851.	2,317,316 38

Total.....	\$6,441,316 38
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Dividends paid to, and including February 1, 1851.....	\$4,297,900 00
Interest	1,577,806 90

	<hr/> 5,805,706 90
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Dividend and interest less than instalments and interest..... \$635,609 48

There is in the hands of the stockholders, stock to the amount of \$4,124,000. If the above balance of \$635,609 48 be deducted from the total amount of stock, it shows that the shareholders have received back all the principal moneys paid to the company, with interest thereon, at 7 per cent., and are now the owners of a clear surplus in stock equal to \$3,488,390 52. In addition to this, the stock of \$4,124,000 is selling in market at an average premium of 26 per cent., so that the shareholders, by selling their stock, could realise, after the return of all sums paid by them, and 7 per cent. for its use, a clear net surplus of more than four millions and a half of dollars.

A subscriber for 100 shares in 1833, equal to \$10,000, and who had paid thereon in cash \$7,500 up to July, 1836, in the manner stated in the first part of this report, if he had retained all the stock given to him by the several increases, would now be the owner of 225 shares, equal to \$22,500. By selling these shares at the present market price, and making allowance for his proportion of the difference between dividends and instalments, as before given, he would realise a net surplus of \$23,287: besides having received, in dividends, an amount equal to the whole sum paid on calls of stock, with interest thereon, at 7 per cent. per annum, from the date of each payment.

There is no case of a public work on this continent which has yielded profits equal to this, or come near it, except the Erie canal, which passes through the same valley, and draws its revenue from the same sources.

These are the results of a railroad on the great central thoroughfare, from the western lakes to the Hudson. The Erie canal, stretching the whole distance from Lake Erie to tide water, gave a net revenue for the last year, equal to the interest at 6 per cent on a capital of nearly forty two millions of dollars. This canal originally cost a little more than seven millions of dollars; there has been expended for construction, on its enlargement, sixteen millions, making a total outlay of about twenty-three millions of dollars. Assuming that about one third of the expenditure on the enlargement is

unavailable, it would show that the Erie canal yields a net annual surplus of about fifteen per cent on its cost. The net surplus of 1836, the year in which the railroad was put in operation, and before any progress had been made in the enlargement, was more than 18 per cent on the original cost of the Erie canal.

As the canal and the proposed road will occupy the same side of the river, a large local business is anticipated from the numerous villages to which the former has given birth. In case of accident to the canal, freight could be readily transferred to the railroad, as could all freight caught in the ice at the close of the season.

It is estimated that at least \$500,000 can be raised on the line of the proposed road. The balance is to be provided by other subscriptions, to be obtained, we presume, chiefly in this city, and by the issue of bonds.

The report of the directors, prepared by their president, Hon. A. C. Flagg, and also that of the chief engineer, E. H. Brodhead, Esq., are able and interesting documents. Mr. Flagg's long and intimate connection with the public works of our State, renders everything coming from his pen worthy of attention.

Increase of Banking Capital in Massachusetts.

In addition to the free banking law, the Legislature of Massachusetts, at its late session, made the following additions to the banking capital of that state:-

NEW BANK CHARTERS GRANTED IN MASSACHUSETTS.		
Name.	Location.	Capital.
Hadley Falls Bank.....	Holyoke.....	\$100,000
Westfield Bank.....	Westfield.....	100,000
Cambridge Market Bank.	Cambridge.....	100,000
Faneuil Hall Bank.....	Boston.....	500,000
Blackstone Bank.....	Boston.....	250,000
Essex Bank.....	Haverhill.....	100,000
Mechanics Bank.....	Worcester.....	150,000

CAPITALS INCREASED.

Boston.

Exchange Bank.....	\$500,000
Shoe and Leather Dealers.....	250,000
Granite.....	250,000
Cochituate.....	100,000
Tradesmens, Chelsea.....	50,000
Prescott, Lowell.....	50,000
Quinsigamond, Worcester.....	50,000
Merchants, N. Bedford.....	200,000
Commercial, "	200,000
Marine, "	200,000
Adams Bank.....	50,000
Worcester Bank.....	50,000
Traders Bank.....	200,000
Freemans.....	50,000
Bank of Commerce.....	750,000
Boylston.....	50,000
Lancaster Bank.....	25,000
Fall River Bank.....	50,000
Warren, Danvers.....	60,000
Lee Bank.....	50,000
Barnstable Bank.....	100,000
Agricultural, Pittsfield.....	50,000
Laughton, Lynn.....	50,000
Bay State, Lawrence.....	200,000
Milford Bank.....	50,000
Rollstone, Fitchburg.....	100,000

Flood on the Wabash.

Our exchanges from every part of the Wabash country speak of the heavy rains which have fallen lately. The Wabash is at flood height, and immense destruction of property has ensued. Our last reports were of a continued rise. The Wabash canal has suffered greatly. One aqueduct is gone, 15 miles east of Huntington, and another 6 miles east of the same place. Another is injured between Peru and Huntington, and there is a break between Logansport and Toledo. The Wabash

river is very high, threatening the destruction of the aqueducts and bridges at Logansport.

Illinois Canal.

The two trustees of the Illinois canal fund, David Leavitt and Wm. H. Swift, have been re-elected. At the annual sale of canal lands, the prices obtained showed a considerable advance over the last sale, being an average of about 15 per cent.—The amount realised exceeds two hundred thousand dollars, which added to the increased receipts on the canal, will enable the trustees to pay the semi-annual interest on the loan, due in October, and 21 per cent of the principal.

American Sea Steamers.

We copy from the Tribune the following list of American sea steamers—their tonnage, routes, and present location or destination. It offers a striking picture of the degree of development to which this important branch of our commercial marine has attained:

ATLANTIC STEAMERS.

Between New York and Liverpool.

COLLINS' LINE.

Atlantic	West.....	2,771 tons.
Arctic	Luce.....	3,000 "
Baltic	Comstock.....	3,000 "
Pacific	Nye	3,000 "

Between New York and Havre.

M. LIVINGSTON.

Franklin	Wotton.....	2,300 tons.
Humboldt	Lines.....	2,500 "

Between New York and Bremen,

(via Southampton.)

MOLLER, SAND & RIERA.

Washington	Floyd	1,700 tons.
Hermann.....	Crabtree	1,800 "

Between Philadelphia and Liverpool.

J. G. WILLIAMS, 188 Front st., New York, Agent.

Lafayette	Goddard.....	1,200 tons.
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Between New York and New Orleans.

SPOFFORD, TILESTON & CO.

Union	Budd	1,400 tons.
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DAVIS, BROOKS & CO.

Winfield Scott	Couillard.....	1,300 tons.
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Between New York and Charleston.

SPOFFORD, TILESTON & CO.

Southerner	Dickinson	795 tons.
Marion	Berry	900 "

Between New York and Savannah.

S. L. MITCHELL.

Alabama	Ludlow	1,500 tons.
Florida	Lyon	1,500 "

Between Philadelphia and Charleston.

ALBATROSS, NOBLE..... 645 tons.

Ospray	Murden	700 "
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Between Charleston and Havana,

(via Key West.)

Isabel	Rollins	1,115 tons.
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Between New Orleans and Vera Cruz.

ALABAMA..... 676 tons.

	Foster	676 tons.
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Between New Orleans and Galveston.

LOUISIANA..... 1,100 tons.

Galveston	Place	550 "
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PAMPERO..... 379 "

Between New York and Cragres.

OHIO..... 2,462 tons.

GEORGIA.....	PORTER.....	2,591 "
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EMPIRE CITY..... 1,751 "

CRESCENT CITY.....	TANNER.....	1,800 "
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CHEROKEE..... 1,250 "

Brother Jonathan.....	Stoddard.....	1,400 "
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EL DORADO..... 1,000 "

PROMETHEUS.....	WRIGHT.....	1,000 "
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North America..... 1,500 "

Philadelphia.....	Pearson.....	897 "
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Between New Orleans and Chagres.

Mexico.....	Talbot	1,200 "
Falcon.....	Hartstein	1,000 "

PACIFIC STEAMERS.*Between San Francisco and Panama.*

On the 1st and 15th of each month.

Oregon.....	Pearson	1,050 tons.
California.....	Budd	1,100 "
Northerner.....	Randall	1,000 "
Republic.....	Hudson	1,200 "
Tennessee.....	Totten	1,250 "
Panama.....	Watkins	1,100 "
Columbus.....	Hitchcock.....	600 "
New Orleans.....	Wood	761 "
Antelope.....	Hickley	650 "
Fremont.....	576 "
Isthmus.....	Ottinger	380 "
Constitution.....	Bissell	530 "
Carolina.....	Whiting	545 "
Ohio.....	Ray	225 "

Between San Francisco and Oregon.

Gold Hunter.....	Hall	400 "
Sea Gull.....	Eyre	267 "
Columbia.....	Le Roy	700 "
Com. Preble.....	Ballard	280 "

Between San Francisco, Gold Bluff and Trinity Bay.

Chesapeake.....	Hunt	392 tons.
Gen. Warren.....	Smith	309 "
Goliath.....	Thomas	334 "
Eudora.....	Barkman	400 "
<i>Between San Francisco and Sacramento City.</i>		
New World.....	Hutchings	600 tons.
Confidence.....	Gannett	370 "
West Point.....	Kelsey	225 "
Senator.....	Van Pelt	750 "
Independent.....	Cook	700 "
Monumental City.....	Morris	1,000 "
Sea Bird.....	Tucker	480 "
Union.....	Marks	560 "
Com. Stockton.....	Baker	500 "
New York.....	Averill	800 "
Washington.....	Bonney	1,000 "
W. J. Pease.....	Jessup	314 "
Pacific.....	Bailey	1,000 "
Fanny.....	McCerren	680 "
Pioneer.....	Eldridge	2,000 "
Wils. G. Hunt.....	Spall	297 "
Chesapeake.....	Hunt	400 "
Gen. Warren.....	Smith	400 "

Virginia.

Greensville and Roanoke Railroad.—By the report of the proceedings of the 17th annual meeting of the stockholders of the Greensville and Roanoke railroad company, held on the 16th ult., we learn that H. D. Bird was unanimously re-elected President, and A. G. McIlwaine, John Bragg, B. H. May, Robert Leslie, and Edmund Wilkins, Directors. The meeting give it as their opinion that it is of the utmost importance that the stockholders of their company should subscribe to the stock of the Raleigh and Gaston railroad company.

Mr. Bird, the President, on behalf of the directors of the Greensville and Roanoke road, reports for the fiscal year ending on the 30th of April, 1851, the receipts \$37,461, and the expenses \$22,829—making the net income \$14,631. This, with the addition of the surplus on hand, made the sum applicable to dividends \$16,421. Out of this a dividend of seven and a half per cent has been declared, leaving a surplus in hand of \$1,421. The falling off in freights during the year was \$4,211, but the gain in passengers \$1,908—making the net falling off in receipts from the previous year \$2,302. This decline is mainly attributable to the short crop of tobacco. Mr. Bird states that the Petersburg commissioners are still soliciting subscriptions for the purpose of re-building the Raleigh and Gaston road, but owing to the numerous heavy demands that have of late been made upon the people of Petersburg for other works, the subscription list fills up slowly. Mr. Bird strongly urges the stockholders of the Greensville and Roanoke road, who have not as yet subscribed to the stock in the new company, to come forward now and do so. Besides securing the prosperity of their

own road, he thinks that they will be also making a profitable investment.

The capital of the Greenville and Roanoke road is \$200,000. The debt has been all paid off, and the cost of the road reduced to the amount of the capital. The committee of examination report the road to be in good order, and recommend that measures be taken to have the track laid down with T rails, which they think will establish the prosperity of the road on a permanent basis.—*South Side Democrat.*

The following are claimed to be the distances on the Baltimore and Ohio railroad and the Manasses Gap railroad respectively, from Alexandria and Baltimore.

Baltimore to Cumberland..... 179 miles.
Cumberland to Tygart's Valley bridge. 101 "

Distance 280 "

Alexandria to Strasburg 93 miles.

Strasburg to Paddy Town 60 "

Paddy Town to Tygart's Valley bridge. 81 "

Distance 234 "

It will be thus seen that the distance to a common point of junction is 46 miles in favor of Alexandria.

At the annual meeting of the stockholders of the Detroit and Lake Superior Smelting and Mining company of Michigan, held in Detroit on Monday, May the 27th, the following persons were elected officers for the ensuing year:

S. McKnight, President.

Directors—C. A. Trowbridge, Robt. J. Graverout, Andrew Harvie, H. N. Walker, George R. Griswold.

Massachusetts.

Grand Junction Railroad.—At the annual meeting of the stockholders of this corporation, held at No. 1 Commercial wharf, on Friday afternoon, the list of directors was elected: Samuel S. Lewis, David Henshaw, Charles Paine, Ichabod Goodwin, and John W. Fenno. A report from the engineer was read, which stated that the road would probably be completed by July. At a subsequent meeting of the directors, S. S. Lewis was chosen President, D. Brigham, Jr., Treasurer, and J. P. Robinson Clerk.

Pennsylvania.

Sunbury and Erie Railroad.—The Philadelphia papers state that the ceremony of breaking ground on the line of this important railroad was performed on the 20th ult., near Farransville, Clinton Co., Pa., by the President of the road, in the presence of Judge Giles, of Elk, and Gen. Flemming, of Clinton, Directors, and a number of other gentlemen. The work is fast progressing. The grading is nearly all completed, and about eight miles of track is laid south of Ravenna, and the gang are putting down a half mile of iron per day.—*Portage County Whig.*

Scioto and Hocking Valley Railroad.—The following gentlemen have been chosen directors of the above road the present year, viz.:—

C. A. M. Damarin; J. V. Robinson; J. L. McVey; P. Kinney, Scioto County; Francis Campbell, Ross County; and Israel Dille, Licking County.

Louisiana.

Extension of the Carrollton Railroad to the Lake.—For some time past the Carrollton railroad company have been steadily engaged in pushing forward an extension of their line from Carrollton to Lake Pontchartrain, and the road has at length been cut through to the point where it is intended to strike the lake shore. The gradings of the line are nearly complete, and the work is at the present time progressing fast. A few days ago a number of men were set to work, under the active superintendence of Mr. J. Hampson, to lay down the rails. They commenced at the Carrollton railroad depot, and between one hundred and two hundred yards of the track was laid on Saturday evening. The road is intended to pass through Levee street, in the town of Carrollton, and to run parallel with the river as far as Upper Line street, from which place it will branch off to the lake, and strike the shore at a point about six hundred yards from the hotel at the end of the Shell Road, making the whole distance about five miles. When completed, which will be in the course of a few months, the road will be of great service to Carrollton, as well as to the upper portions of Jefferson city and Lafayette, and every credit is due to the company, for the steady manner in which it

has carried sufficient passes, when the Ridge, the over Levee,

Concordville or Stickney Crocker were cut subsequently Spalding Treasury appears for the year with \$170,800, and La—
Boat

The Montreal held at year voted to River, was to be open right to preference from a stockholder sum-amounted old share as here in May

The to the decision made at once the more interest \$1,150,000 stock a completed, than the expected

King road is York Carolina road 22 miles completed, which of the one, and not exactly wealthy purposes lines of want or to a market will so progress railroad

has carried out the work. The grade of the road is sufficiently high to protect it from injury by crevasses, which may occur above Carrollton, and when the embankment is finished to the Metairie Ridge, it will be impossible for it to be injured from the overflowing of the river, or from breaks in the Levee.—*Crescent City.*

New Hampshire.

Concord Railroad.—The annual meeting of the Concord railroad corporation, was held at Nashville on Tuesday last. Isaac Spalding, Josiah Stickney, Charles H. Peaslee, Robert Read, Uriel Crocker, Emmons Raymond, and Robert McGaw, were chosen directors for the ensuing year. At a subsequent meeting held by the directors, Isaac Spalding was chosen President; N. P. Lovering Treasurer; and John H. George, Clerk. It appears from the report that the total receipts for the year was \$307,862 72. The expenditures were \$170,896 32. Balance of receipts over expenditures, \$136,966 40. The receipt of the Manchester and Lawrence railroad—now leased by the Concord—for the last six months, was \$37,679 72.

Boston, Concord and Montreal Railroad.

The annual meeting of the Boston, Concord and Montreal Railroad, says the *Boston Courier*, was held at Wentworth on the 27th. The board of last year were re-elected without opposition. It was voted unanimously to complete the road to Wells River, and \$600,000 six per cent. preferred stock was voted for that purpose. Subscriptions are to be opened immediately for \$200,000 of this stock, and for each share taken the subscriber has the right to exchange one of the existing shares for a preferred share. Subscriptions will be received from any person, but the right is reserved to each stockholder to claim his proportion. With this sum and the other \$200,000 of the stock, it is estimated the remainder of the road can be built. The old shares are to receive annual interest, in stock, as heretofore, until the completion of the road, and the dividends on the preferred shares are payable in May and November in each year.

The effect of this arrangement is advantageous to the old stock, and the bonus given by the conversion must secure the subscription of the \$200,000 at once. The cost of the entire road, as stated at the meeting, including \$150,000 of stockholders' interest, will be \$2,250,000, represented by about \$1,150,000 on old stock, and \$1,100,000 preferred stock and bonds; and the net income, when completed, is estimated at least \$150,000, which is more than the interest on the entire cost. The road is expected to be completed during the next year.

South Carolina.

Kings Mountain Railroad.—The object of this road is to connect Yorkville, the county town of York District, with the Charlotte and South Carolina railroad at Chester Court House, by a line of 22 miles. The grading of this road is nearly completed, and will soon be in readiness for the iron, which has been purchased, together with a portion of the machinery. The route is a very favorable one, and the whole cost of the road, equipped, will not exceed \$10,000 to the mile. It is built by a few wealthy citizens of York and the vicinity, for the purpose of connecting themselves with the great lines of railroad reaching to Charleston. The want of suitable facilities for sending their produce to a market, has been felt to be a serious evil in the northwestern portion of South Carolina. This will soon be removed by the various roads now in progress in the interior. The Kings Mountain railroad will supply to the portion of South Caro-

lina that it traverses, and to the western part of North Carolina, what has long been wanting to the proper development of that interesting and fertile portion of the country, and will attract to itself a large trade. As for its appropriate business, it is without a rival. It will render Yorkville a depot for the trade of a large section of country.

Ohio.

Central Railroad.—Very rapid progress is making in the preparation of this road for the iron, the laying of which is to commence in July next, probably on the 4th, between Zanesville and Newark. The completion of this link will bring the pioneer city into direct railroad communication with Sandusky and Cleveland. The whole of this road is being pushed with great vigor, and there is a strong probability that it will be completed by the time the Baltimore and Ohio railroad reaches Wheeling, so as to form, in connection with the two, a continuous line from Baltimore to the western part of Ohio, and to Cincinnati.

Nashua and Worcester Railroad.

At a recent meeting of the stockholders in this road, the following persons were chosen directors for the present year, viz: Daniel Abbot of Nashville, Thomas B. Wales of Boston, Jesse Bowers of Nashua, Wm. Boardman of Nashville, Wm. Amory of Boston.

Ashuelot Railroad.

From the report made at the last meeting of the Ashuelot railroad company, it appears that the length of the main track is twenty-three and three-quarters miles; length of sidings, one and one-half miles; weight of rail per yard, fifty-eight pounds; maximum grade, thirty-four and one quarter feet; maximum grade in length, 225 rods; average grade per mile, eighteen feet. Total rise in road, 108 feet; total fall, 321 feet; shortest radius of curvature, 910 feet; total length of curve in road, seven and three-quarters miles; total length of straight line, fourteen miles; aggregate length of wooden truss bridges, 1,223 feet; number of public ways crossed at grade, nineteen; number of stations five. The whole cost of the road, as near as can be ascertained, will not vary much from \$510,000.

New York.

Railroad from Canandaigua to Niagara Falls.—The route of this road has been surveyed, and we learn that a report of the same will be published in a few days. The distance to the Suspension Bridge at Niagara Falls is reputed to be 92 miles from Canandaigua, over 80 per cent. of the distance is composed of straight lines, with grades at no point as high as forty feet, and an average grade of only 17 feet per mile. It is also stated that the last thirty miles or so of the route, is perfectly straight and perfectly level. As soon as we receive a copy of the report, we shall give a mere detailed notice of the survey.

East Tennessee and Virginia Railroad.

The directors of this company are about to put 45 miles more of road under contract, commencing at the Virginia State line, and extending to Rhea-ville, in Greene county. The lettings are to take place in October.

This will leave 40 miles only of the road not under contract, viz: from Knoxville to the section of 40 miles recently let to Mr. Furgerson, 15 miles; and 25 miles necessary to connect Furgerson's division with the one above named. The whole line of the road is about 125 miles. It is the intention of the directors to have the work of the above road

advance *pari passu* with that on the Virginia and Tennessee road. This road will open an outlet on the north. On the south a connection will be formed with the East Tennessee and Georgia road. As the East Tennessee and Virginia is the connecting link between the two, it cannot be brought into profitable use till these are completed.

When all the above roads shall be opened, a continuous line of railway will be formed, connecting the extremes of our country, and running through a section probably the most attractive for its natural scenery, and for its mineral and agricultural resources, that can be found for an equal distance throughout our widely extended domain.

Pennsylvania.

Sanbury and Erie Railroad.—The Philadelphia American states that the ceremony of breaking ground on the line of this important railroad, was performed on the 20th instant, near Farransville, Clinton County, Pa., by the president of the road, in the presence of Judge Giles, of Elk, and Gen. Flemming, of Clinton, directors, and a number of other gentlemen. A contract was made immediately for grading a portion of the work.

Railroad to the Pacific.

The New Haven Palladium publishes an interesting letter from Forest Shepherd, Esq., written at Sacramento City, and chiefly descriptive of the topography and geological wonders of California. He says that it is now ascertained almost beyond doubt, that a Railroad can be constructed from the Mississippi to the Pacific, without crossing any mountains, or without meeting more impediment from snow than would a road from Albany to Boston. He gives the following sketch of the route:

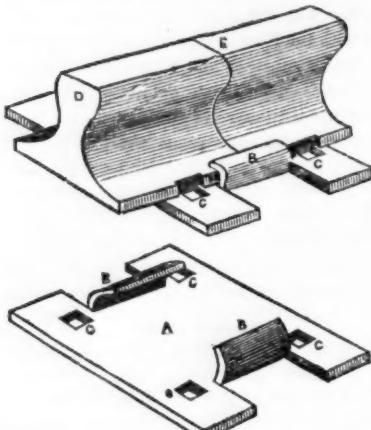
This route is from the head or southern portion of Tulare valley, through Walker's pass, thence to the Mojaree river, thence north-eastward to high grounds on the tributaries of the Rio Colorado, thence crossing said river above the great Canyon, thence east to Pilot Mountain near Santa Fe, passing Pilot Mountain on the north side, thence to Santa Fe and the Mississippi at Apple Creek below St. Louis, where there is a good landing and open navigation to New Orleans through the winter, and of course a road on the bank of the Mississippi to St. Louis. This route will be 600 or 800 miles nearer than any other, has wood and water nearly the whole distance, and abundance of stone and coal at Santa Fe. The above route will accommodate both north and south, New Mexico and California, and ocean steamers will soon render a trip from San Francisco to Astoria as light a matter as at present from Buffalo to Chicago or Mackinaw. The route further north is very objectionable on account of the snow on the table lands on the head waters of Feather river. I have travelled over snow, apparently undriven, varying from twelve to twenty feet in depth, in the month of June.

Missouri.

Railroad from St. Charles to Alton.—The St. Louis Intelligencer states that efforts are making to build a railroad from St. Charles to Alton. The distance is only about 16 miles, and the route will be through a rich country, highly favorable to the construction of the road. The citizens of Alton, and those who are interested in the Alton and Springfield road, have given much encouragement to the enterprise, and will probably take stock liberally.

The Intelligencer says the road will be built, unless immediate steps are taken to build one from St. Louis to St. Charles, and urges the importance of the latter to the interest of St. Louis. The distance between the last point is about 20 miles, and the road it is estimated would cost \$400,000.

The American Railroad Chair Manufacturing Co.



ARE prepared to make WROUGHT IRON RAIL ROAD CHAIRS, of various sizes, at short notice.

By use of the WROUGHT IRON CHAIR, the necessity of the wedge is entirely done away—the lips of the chair being set, by means of a sledge or hammer, close and firmly to the flange of the rail.

The less thickness of metal necessary in the Wrought Iron Chair gives much greater power and force to the spikes when driven—and consequently a much less liability to the spreading of the rails by reason of the spikes drawing or becoming bent.

The less weight necessary in the Wrought Iron Chair, will enable us to furnish them at a cost much below that of CAST IRON CHAIRS.

DESCRIPTION OF THE ABOVE CUTS.

Figure 1 is a perspective view of the rail secured in the chair, and fig. 2 is a perspective view of the chair itself. D, E, are sections of two rails placed together, and secured at the joint on the chair by the jaws B, B. The chair is bolted down by spikes C, C. In fig. 2, the chair is represented as made of a single block or plate A of wrought iron.

The chair is set in its proper place on the track, spiked down, and the ends of the two rails brought together within the jaws as represented in fig. 1.

For further information address,

N. C. TROWERIDGE, Secretary,
Poughkeepsie, N. Y.

June 1, 1851.

Patent Excelsior Spring for Railroad Cars, Locomotives, etc.

THESE Springs, composed of Steel and Wood, as described in this Journal last week, are now being manufactured and sold by the Excelsior Spring Co.—under a Patent granted on 20th May.

This is undoubtedly the best Spring of the day—it is very simple—easy of application—light—cannot get out of order—and it is without any exception the most adjustable spring now made—for it will spring 50 or 5,000 pounds with the same ease.

The cost of the springs is very much less than that of any other.

The Excelsior Spring Co., determined that every spring shall be of the best quality, have established a Factory, where each spring is made directly under the eye of Mr. Bissell, the inventor—and before a spring is allowed to leave the factory it is subjected to a much severer test than it ever can be when at work. Each Spring is guaranteed to perform the required work.

Any person infringing on this patent will be prosecuted.

Office of EXCELSIOR SPRING COMPANY.
33 Broadway, New York.

June 7, 1851.

Railway Iron.

3000 TONS, 50, 57, and 60 lb. Rails, made of best English Iron and under particular specifications.

Also;

Rails imported on commission or at a fixed price, delivered at a port in England, or at any port in the United States. Apply to

DAVIS, BROOKS & CO.,

June 5, 1851. 38 Beaver st., New York.

TO CONTRACTORS.

*Engineer's Office, S. S. R. Road Co.,
Petersburg, Va., May 27, 1851.*

PROPOSALS will be received at the Engineer's office, South Side Railroad, at Petersburg, Va., until the 31st of July next, for the construction of Appomattox Bridge, to be erected near Farmville.

The Bridge will be about 3000 feet long and 80 feet high; to consist of a wooden superstructure resting on abutments and piers.

The piers will be of brick or stone, to be determined after receiving the proposals.

Good brick earth can be obtained near the site of the Bridge.

The proposals may be made for the structure complete, or for the various items of work and materials, viz.: Masonry, furnishing Bricks or Timber; workmanship of laying Bricks and workmanship of superstructure.

Security will be required for the fulfilments of the contracts, and it will be necessary that each proposal be accompanied with a letter from a responsible person or persons, stating that they will become security.

C. O. SANFORD,
Ch. Engineer, S. Side R. Road.

AMERICAN RAILROAD JOURNAL.

Saturday, June 7, 1851.

Stock and Money Market.

After a long period of comparative quiet, a strong speculative feeling has taken hold upon the market, as will be seen in the rapid rise in some of the leading fancies. This movement, to a great extent, results from the operations of speculators, and is irrespective of the real value of the stocks, in which we see the greatest advance, and interests outsiders, only as indicating an abundance of money. Money is now abundant, and there seems to be no difference of opinion of its remaining so during the season; this will enable our works in progress to take a long stride before any reverse can come. We are now under full sail, and but poorly prepared for a storm; but if our leading enterprises can make port before the tempest breaks, we can then ride it out without injury. The present year will send us far ahead. None of our principal new works are crippled for means, but in every part of the country we witness the greatest activity and progress. The rapid increase of receipts upon all our roads has a strong tendency to strengthen public confidence in this kind of property.

Railroad bonds of the first class are more in demand at from 85 to 90 cents; but as there is every kind of security constantly pressing upon the market, prices of course vary to meet the difference in quality. The recent sales of the Seaboard and Roanoke were at a pretty high figure, but it must be borne in mind that the road is owned by a party of capitalists, and they of course will not pay any more than the market price for money. The stockholders in the road undoubtedly took a large portion of the bonds. This sale, therefore, is no standard for the bonds of other companies.

It will be seen by a list, which we give in another column, of roads in progress in this State, that the west is not the only theatre of active operations. By fall, 1000 miles of new road will be under contract in this State alone.

The rail market in England is dull at last quotations, and is likely to remain so for some time to come.

The recent sale of the bonds of the Seaboard and Roanoke attracted a good deal of attention. The amount bid for was nearly twice as much as was

needed, and the range of bids was smaller than usual, the lowest being \$4.80 and the highest \$9.20. The successful bids are as follows:

15 bonds, C. C. Alger.....	90.20
2—J. H. Carter.....	90.06
20—Denistoun Wood & Co.....	90.00
5—J. H. Carter.....	90.00
20—F. S. Currath.....	90.00
5—E. Crehore.....	90.00
20—David Henshaw.....	90.00
5—J. W. Ward.....	90.00
15—Wm. Jessup & Son.....	90.00
1—Chubb, Schenck & Co.....	89.77
25—Clark, Dodge & Co.....	89.75
10—E. C. McIntosh.....	89.65
2—J. H. Carter.....	89.56
15—J. F. A. Sanford.....	89.55
2—J. H. Carter.....	89.50
15—Denistoun, Wood & Co.....	89.15
15—Wm. Jessup & Sons.....	89.10
15—Denistoun, Wood & Co.....	88.60
5—DeLaunay, Iselin & Clarke.....	89.10
2—J. H. Carter.....	89.06
25—Clark, Dodge & Co.....	89.00
4—J. H. Carter.....	89.00
10—Cooper & Hewitt.....	88.75
25—S. J. Beals.....	88.56
20—J. A. Sanford.....	88.65
10—E. C. McIntosh.....	88.50
2—J. H. Carter.....	88.50
10—Cooper & Hewitt.....	88.20
5—DeLaunay, Iselin & Clarke.....	88.10
8—J. H. Carter.....	88.00
2—P. Speyer & Co.....	88.00
2—P. Speyer & Co.....	87.75
13—Ward & Co.....	87.51

New York and New Haven Railroad.—The earnings of the New York and New Haven road in May show a continuation of the large traffic which has flowed over that road during the year. The receipts are:—

Passengers.....	\$51,971 70
Freight.....	8,000 00

Total \$59,971 70

Paid Harlem road for 46,497 passengers 4,102 68

Net receipts..... \$55,869 02

May, 1850..... 38,470 55

Increase in 1850 (nearly 50 per cent) \$17,398 47

The increase in the Harlem railroad receipts are considerable larger than was anticipated.

The figures are..... \$58,045 54

May, 1850..... 44,446 80

Increase (over 30 per cent) \$13,598 74

The increase in five months is nearly \$52,000

The earnings of the Michigan Southern railroad for May were \$24,274 72, against \$10,954 78 for the corresponding month of the last year. The earnings for the first five months of this year compare with those of the same months of 1850 as follows:—

	1850.	1851.
January	\$ 2,510 80	\$16,869 64
February	4,524 98	16,506 88
March	2,809 83	11,743 78
April	6,557 69	21,059 58
May	10,954 78	24,274 72
Total	\$27,358 08	\$90,454 60
		27,358 08

Increase for five months..... \$63,096 52
equal to about 230 pr. ct.

The total earnings of the road for the year 1850 were \$149,000, of which about 5-7ths accrued within the last five months of the year. Should the above ratio of increase continue during the year, the total earnings for 1851 will exceed \$460,000.

The following comparative statement shows the imports and exports from Canada to the United States, for the two years of 1849 and 1850:

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Total...

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Harlem

Stonington

L. I. R.

Norwich

Del. & E

Reading

Morris C

Erie inc

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Canton.

Farmers

Old Col

Boston a

Eastern I

Fitchburg

Michigan

Northern

Vermont

Vermont

Western

Ogdensburg

Rutland

Boston a

Rutland I

Ogdensburg

Vermont

Boston a

Philadelphia

Concord

1

AMERICAN RAILROAD JOURNAL.

361

Imports from U. S.	£1,242,855
Exports to "	857,442
	<hr/>
	£385,413

Total increase.

The entire imports of Canada for 1849 was £3,002,599, in 1850 £4,245,517; about one-third of the whole import was from the United States. The trade of Canada with this country is yearly increasing, and becoming of yearly importance and consideration.

The earnings of the Madison and Indianapolis road for May show a continuance of the large increase in traffic which has characterised this season. The earnings are

May, 1850..... \$25,500

Increase

For five months 1851..... \$6,200

For five months 1850..... \$135,150

Increase (over 50 per cent.)

The coinage at the Philadelphia Mint in pieces, during May, is believed to have exceeded any ever before executed at the Mint within the same time. Of all the smaller gold coins, a large amount has been accumulated beyond the demands of the depositors.

No. of pieces.

86,747 Double Eagles..... \$1,734,940

26,695 Eagles..... 266,950

43,000 Half Eagles..... 215,000

234,676 Quarter Eagles..... 561,690

422,682 Gold Dollars..... 422,682

803 800.....

1,254,600 Three cent pieces..... \$3,201,262

969,900 cents..... 37,638

Total..... \$3,248,599

Total Gold Bullion deposited for coinage from 1st

to 3d May, 1851, inclusive:

From California..... \$3,205,600

From other sources..... 65,600

Total..... 3,271,200

Silver bullion deposited in same time..... 14,800

SALES OF STOCK IN NEW YORK.

	May 29.	June 5.
Sales.	Sales.	Sales.
U. S '67 Loan.....	117 $\frac{1}{2}$	116 $\frac{1}{2}$
Erie R.R.	88	88 $\frac{1}{2}$
Harlem R.R.	76 $\frac{1}{2}$	77
Stonington.....	43 $\frac{1}{2}$	44
L. I. R.R.	22 $\frac{1}{2}$	21 $\frac{1}{2}$
Norwich & Wor.	64 $\frac{1}{2}$	65 $\frac{1}{2}$
Del. & Hudson....	121 $\frac{1}{2}$	121 $\frac{1}{2}$
Reading.....	59	53 $\frac{1}{2}$
Morris Canal.....	16 $\frac{1}{2}$	16 $\frac{1}{2}$
Erie income.....	97	97 $\frac{1}{2}$
" " Bonds.	103	103 $\frac{1}{2}$
Canton.....	79	80
Farmers Loan.....	69	69 $\frac{1}{2}$

SALES OF STOCKS IN BOSTON.

	May 28.	June 4.
Boston and Maine R.R.	67	68
Eastern Railroad.....	106	106 $\frac{1}{2}$
Pittsburg Railroad.....	102	102 $\frac{1}{2}$
Licghian Central Railroad.....	113	113 $\frac{1}{2}$
Northern Railroad.....	103	104
Vermont Central Railroad.....	70 $\frac{1}{2}$	71
Vermont and Mass. R.R.	37	36 $\frac{1}{2}$
Western Railroad.....	20 $\frac{1}{2}$	29 $\frac{1}{2}$
Ogdensburg Railroad.....	106	108
Portland Railroad.....	39 $\frac{1}{2}$	39
Caston and Worcester Railroad.	57 $\frac{1}{2}$	58
Portland Railroad Bonds....	106	106 $\frac{1}{2}$
Lensburg Railroad Bonds....	97	97
Mont Central R.R. Bonds....	97 $\frac{1}{2}$	97 $\frac{1}{2}$
Caston and Providence R.R.	91	91 $\frac{1}{2}$
Philadelphia, Wilm'gton & Balt.	29 $\frac{1}{2}$	30 $\frac{1}{2}$
Scord R.R.	53 $\frac{1}{2}$	55

Railroads in New York.

The following is we believe a correct list of the railroads in New York in operation and progress, together with the length of their respective lines.

Railroads in operation.
Railroads in progress.

Contemplat-ed.

will add some 300 miles to the above estimate.—New York bids fair to maintain her superiority in the extent of her railroads, as in every thing else. She is certainly superior to all her sister States in the facilities for transportation and travel with which she has furnished her people.

New York.

Buffalo and Rochester Railroad.—The annual meeting of the stockholders of this company took place at Rochester on Monday, and the following gentlemen were elected directors for the ensuing year :

Joseph Field, Dean Richmond, Henry Martin, Francis H. Tows, Frederick Whittlesey, Daniel W. Tomlinson, Asa Sprague, Lewis Brooks, Heman J. Redfield, George H. Mumford, Aaron Rumsey, Lemuel Dana, and Willian F. Weld.

At a subsequent meeting of the board, Joseph Field was re-elected President, and Dean Rich mond Vice-President.

Utica and Schenectady Railroad Company.—At the annual election held on the 2d inst., the following gentlemen were elected directors for the ensuing year :

Erastus Corning, Gardner G. Howland, Nicholas Devereux, Nathaniel S. Benton, Alonzo C. Paige, John Townsend, James Hooker, Thomas W. Olcott, Marcus T. Reynolds, J. Phillips Phoenix, E. T. T. Martin, Livingston Spraker, John Ellis.

At a subsequent meeting of the board, Erastus Corning was unanimously re-elected President, and Gardner G. Howland, Vice-President of the company.

Syracuse and Utica Railroad.—At the annual election for directors of this company, held at the office of the company in Syracuse, on Tuesday, the following gentlemen were chosen :

John Wilkinson, Charles Stebbins, Oliver Teall, David Wager, Holmes Hutchinson, James Watson Williams, Hamilton White, Elias W. Leavenworth, Joel Rathbone, John Stryker, Samuel French, James Hooker, and Joseph Battell.

Wisconsin.

Rock River Valley and Union R. R.—This road, though it has attracted but little public attention, is making rapid progress, and bids fair soon to take a prominent place amongst the railroads of this country. The portion of line now under contract, extends from Fon du Lac to Janesville, and will be 86 miles long; this is all under contract. The rails have been purchased, and parties are now at the east for the purpose of procuring machinery, etc. Twenty-two miles, commencing at Fon Du Lac, will be opened in the spring, and the remainder of the line completed in less than two years from that time.

From Janesville to Chicago, it is proposed to build an independent line, and not unite with the Chicago and Galena railroad. For this a charter has been obtained in both States. This division of the road will be about 90 miles. From Janesville, a branch is to be made to Madison, the capital of the State, 40 miles, and will probably be extended to the Wisconsin River, some 40 miles further, making the whole length of this road, with its branches, 241 miles.

The road is in strong hands, and will be urged forward with all possible vigor. Abundant means are provided for that portion of the road under contract, and there is no doubt that sufficient can also be obtained for the other parts of the line named, as soon as they can be prepared for a letting.

In addition to the branches described, the above company possess the right under their charter to build a branch to Lake Superior. The building of this line tho' not occupying immediate attention of the company, is an event which cannot be long

86
90
40
216

deferred. The outlet of the whole Lake Superior region must be through Wisconsin, and the growing importance of the country bordering the great Lake, will soon render a railroad indispensable, and justify its construction. Both in mineral wealth, and in fertility of soil, the southern shore of Lake Superior is unrivaled, and a tide of emigration is now setting in that direction that will soon make it a populous territory. All that portion of Wisconsin north of the Wisconsin and Fox Rivers, is covered with a dense forest and must be the source of supply of lumber to all the territory of southern Wisconsin and northern Illinois. In the transportation of this article alone, a road from Lake Superior, south, would find a profitable business.

Lake Winnebago, the present northern terminus of the above road, is the recipient of a number of large rivers, among the most important of which is Wolfe River, which is navigable for steamboats for nearly one hundred miles into the interior. The lumber from tributaries to this lake, will, on the completion of the above road, be taken to Fon Du Lac, and from thence forwarded by railroad to various parts of the state. Lake Winnebago is only 160 feet above Lake Michigan, and canals are now in progress around the rapids between the two, and steamboats will soon be able to pass from one to the other. Fon Du Lac will then become the "head of navigation," and the commercial depot for the central portions of Wisconsin.

It is very difficult for eastern people, until they have been over the ground, to form an idea of the ease and rapidity with which roads can be built in such a state as Wisconsin, and they have hardly any idea of the extensive system of railroads projected and in progress in the western states. From Fon Du Lac to Janesville, no rock cutting is encountered, and the grade in no case exceeds 26 feet to the mile. The grading, which with us is the most expensive item in railroad construction, is one of the least there; and where there is means enough on the line of any western road, to prepare the road bed for the iron, there is but little difficulty, in the present state of the money market, in borrowing a sufficient sum to buy the rails and stock the road. These works therefore are enabled to progress in the western states, with a rapidity perfectly astonishing to those whose experience is entirely confined to eastern roads.

The gauge of the above road will be six feet. This, in connection with the Erie gauge, will be very likely, in time, to change the gauge of the intervening road.

Maine.

From Portland to the Kennebec river, there are two rival roads; one, the Kennebec and Portland, running through Brunswick, and striking this river near Bowdoinham, and following it to Augusta, the capital of the State; and the other, the Androscoggin and Kennebec, using 27 miles of the track of the Atlantic and St. Lawrence, and running by way of Lewiston, and striking the Kennebec river at Waterville, about 18 miles above Augusta.—The latter town is 61 miles from Portland, the former 82. From Waterville to Bangor the distance is 55 miles, from Augusta 67. As the two roads are of a different gauge, of course a great deal of interest is felt as to which line shall be extended to the Penobscot; for it is certain that one or the other must be pushed forward to that point. A double interest is at stake; for if the upper or Waterville line is selected, the whole travel east is

thrown upon the Androscoggin and Kennebec and the Atlantic and St. Lawrence railroads, and a large amount of trade is carried to Portland. On the other hand, the Kennebec and Portland railroad company, and the Kennebec towns, for similar reasons, are anxious to push forward the latter work. The latter interests have also been taking measures to push a road from Augusta, past Waterville, to Skowhegan, the principal town of Somerset county, for the purpose of counteracting the influence of the Androscoggin and Kennebec railroad.

A meeting of the friends of the Kennebec and Portland railroad was held at Augusta on the 15th inst., for the purpose of considering the proposed extension to Bangor, of which we have spoken. It was there proposed to unite the two projects of the road to Skowhegan, and that to Bangor, upon a common line, for a distance of 12 or 16 miles from Augusta. This could be done without materially increasing the distance upon either line, and would to the same extent, reduce the distance to be built to reach Bangor. Even if the line from Waterville should be built, a road could strike that line at Unity, 31 miles from Augusta, so that the length of line necessary to reach that point, after leaving the Somerset road, would be reduced to a very small compass. The route to make this connection, is a remarkably favorable one, and is estimated to cost only \$10,385 per mile, without including, we presume, a bridge over the Kennebec river. This road would run through the towns of Vassalboro, China and Albion, which are known to be equal to the best in Maine, the inhabitants of which could readily build the above road, at its estimated cost. Assuming, therefore, that the estimates are tolerably correct, we look upon the above line as very likely to be built, either for the purpose of pushing it from Unity to Bangor, or for the purpose of uniting with the upper route at the former place, should that line succeed. Another inducement to the above road, is the fact that a branch would at once be carried to Belfast, the principal town of Waldo county, and the centre of a large business. This branch would be only 20 miles long, and would be readily built by the people of Belfast.

That portion of Maine east of the Kennebec River, is getting to be pretty well supplied with railway accommodations. The great theatre of actual movement for some time to come is to be confined to the territory between that and the Penobscot River.

Notice to Contractors.

Columbus, Piqua and Indiana Railroad.

SEALED PROPOSALS will be received at the Engineer's Office of the Columbus, Piqua and Indiana Railroad Company, at Urbana, on the 8th day of July, 1851, for the Grubbing, Grading and Masonry of that portion of the line extending from St. Paris, in Champaign county, to Columbus, a distance of fifty-six miles. Plans and specifications of the work may be seen from the 1st to the 8th of July, at the office. The Directors reserve the right to retain bids for twenty days after the 8th, before declaring the work.

The names in full of all the parties should be given in the proposals.

A. G. CONOVER, Engineer.
Piqua, May 20, 1851. 3122

Spikes, Spikes, Spikes.

ANY person wishing a simple and effective Spike Machine, or a number of them, may be supplied by addressing J. W. FLACK, Troy, N. Y. or, MOORE HARDWAY, Richmond, Va. March 6, 1850.

Notice to Contractors.

Pennsylvania Railroad.

PROPOSALS will be received from the 9th to the 12th of June next, at Johnstown and Summit, for the Grading and Masonry of that part of the Mountain Division of the Pennsylvania Railroad between Altona, in Blair county, and Pringle's Point, a few miles below Jefferson, in Cambria—a distance of 25 miles.

The road within this distance will cross the Allegheny mountains, encountering some of the heaviest grading offered in this country. In addition to a number of extensive cuttings, embankments and culverts, there will be one tunnel 1200 yards in length at the summit of the mountain, and another of 200 yards through Pringle's Point.

Terms cash, monthly. For further information apply to EDWARD MILLER, Esq., Associate Engineer, Blairsville, Indiana Co., or to STRICKLAND KNEASS, P. A. Engineer, Altona, Blair county. J. EDGAR THOMSON,

Chief Engineer.

Engineer Department P. R. R. Co.,
Philadelphia, May 1st, 1851.

To Contractors.

Office Pacific Railroad Co., St. Louis, Mo., May 16, 1851.

THE Graduation, Masonry, and the Laying of the Superstructure of the first Division of the Pacific Railroad, comprising about 45 miles from the city of St. Louis, westward, will be ready for contract on the 20th of June next.

Proposals will be received at the Engineer's Office, St. Louis, from the 20th to the 30th of June, where plans and specifications will be shown. The line will be ready for inspection on and after the 20th of June.

The line will be divided into sections of about one mile each, but offerers can include as many of them in one bid as may suit their convenience.

The company will not bind itself to accept the lowest off'r, unless in all other respects satisfactory, but reserves the power to dispose of the work in such manner as may appear most advantageous to the interests of the company.

The Division will embrace about one million three hundred thousand (1,300,000) cubic yards of graduation, and about thirty three thousand (33,000) cubic yards of masonry.

THOMAS ALLEN, President.
JAMES. P. KIRKWOOD, Chief Engineer.

Notice to Contractors.

Ohio and Pennsylvania Railroad.

PROPOSALS will be received for the Grading and Bridging of the Western portion of the Ohio and Pennsylvania Railroad, extending from Wooster, by Loudonville and Mansfield, to the Cleveland, Columbus, and Cincinnati Railroad, at Crestline near Galion, a distance of fifty-three miles.

They will be received at Wooster until the evening of Tuesday the 10th of June, and at Mansfield until the evening of Wednesday the 11th of June next, and will be addressed to the undersigned President of the Company. Plans and profiles of the work east of Loudonville will be exhibited at Wooster, and of the work west of Loudonville at Mansfield, for one week before the letting.

Further information and forms of proposals may be obtained on application to Solomon W. Roberts, Chief Engineer, or Jesse R. Straughan, Resident Engineer of the Western Division. A preference will be given to bidders who will agree to take a per centage of their pay in the stock of the Company.

WM. ROBINSON, Jr., President.
Pittsburgh, May 27th, 1851.

Railroad Iron.

THE "Montour Iron Company" is prepared to execute orders for Rails of the usual patterns and weights, and of any required length not exceeding 30 feet per rail. Apply to

THOS. CHAMBERS, President,
66 Broadway, N. Y.

Or to the Agents,
CHOUTEAU, MERLE & SANFORD,
No. 51 New st., New York.
September, 1850.

To Engineers and Ship Builders.

THE Advertiser is desirous of a situation in a respectable concern, he has acquired a practical knowledge of his business in the establishment of R. Napier, Esq., Glasgow, has since for several years had the management of the Works of an extensive Steam Packet Co., for whom he designed and built some Iron Screw Ships, whose capabilities and performances give the highest satisfaction. While acquainted with all the most approved modes of construction of marine engines, he is prepared to submit original designs.—In modelling and draughting he has had much and successful experience. Can produce the highest testimonies as to character and abilities from the first engineer on the Clyde.

Address ENGINEER, box 2315 lower Postoffice.

Lovegrove's Patent Cast Iron Water and Gas Pipes.

THE Subscriber, the Inventor and Patentee of the Centrifugal mode of giving form to metallic substances while in a molten state, is preparing to make Cast Iron Water and Gas Pipes, of any dimensions, at prices much lower than they can be made in the old manner, and the pipes warranted to stand a pressure of three hundred pounds to the square inch, and to be soft enough to drill. Steam Engines and all kinds of machinery. Cast Iron Doors and Frames, and Metal Castings of every description, made to order.

THOMAS J. LOVEGROVE,

Machinist and Founder,
West Falls Avenue, below Pratt st., Baltimore.

To Railroad Companies, etc.


The undersigned has at last succeeded in constructing and securing by letters patent, a Spring Pad-lock which is secure, and cannot be knocked open with a stick, like other spring locks, and therefore particularly useful for locking Cars, and Switches, etc.

I also invite attention to an improved PATE'NT SPRING LOCK, for SLIDING Doors to Freight and Baggage Cars, now in use upon the Pennsylvania Central, Greenville and Columbia, S.C., Reading, Pa., and other Railroads.

Companies that are in want of a good Pad-lock, can have open samples sent them that they may examine and judge for themselves, by sending their address to

C. LIEBRICH,

46 South 8th St. Philadelphia.

May 9, 1851.

SUPERIOR BLACK WRITING & COPYING INK.

Jones' Empire Ink.

87 Nassau st., Sun Building, New York city.

Net prices to the trade—

Quarts, per dozen,	\$1 50	6 oz. per dozen,	\$0 50
Pints, " "	1 00	4 " "	0 37½
8 ounces, " "	0 62½	2 " "	0 25

On draught per Gallon, 20 cents.

This is the best Ink manufactured, it flows freely, is a good copying ink, and will not mould, corrode, precipitate or decay. Orders for export, or home consumption, carefully and promptly attended to by

THEODORE LENT.

Railroad Iron.

THE Subscribers, Agents for the Manufacturers, are prepared to contract for the delivery of Railroad iron at any port in the United States or Canada, or at a shipping port in Wales.

WAINWRIGHT & TAPPAN,
29 Central Wharf.

Boston, June 1, 1851.

To Railroad Companies. SALISBURY REFINED IRON.

THE Undersigned, having enlarged and perfected his Works, is now prepared to furnish Locomotive Tire of a better quality than have heretofore been used. Railroad Companies who may wish it, will be furnished with a set for trial, not to be paid for until they are satisfied of their superior quality over any other. Also made at short notice, and in the best manner, Locomotive Cranks, Engine and Car Axles, and other Locomotive Forgings.

All work ordered from me will be made of Salisbury Iron, and done in the best manner.

Address HORATIO AMES,
Falls Village, Conn.

May 1, 1851.

LOWMOOR AND U. S. BEST FINCH IRON. To Iron Merchants.

JOHN FINCH & SONS, Iron Merchants, Liverpool, now are, and for more than twenty years past have been, sole Agents for the LOWMOOR IRON COMPANY, for the United States and Canada, for the sale of their well known Railway Tire Bars, and Axles, Piston Rods, Boiler Plates, Angle, Rivet, and all other kinds of Lowmoor Iron; also, sole Agents for the sale of the superior St Iorlshire Iron stamped "FINCH CROWN" and "U. S. BEST FINCH;" and Merchants and Wholesale Dealers in all other kinds of British Iron.

We hereby inform our friends and the public that we have this day appointed Mr. WM. BAILEY LANG, of Boston, as our only representative to receive orders and to transact our general business in the United States.

For JOHN FINCH & SONS,
JOHN FINCH Sen.

Boston, April 11, 1851.

LOWMOOR and other Bent, Welded and Blocked RAILWAY TIRES, ready for use, E. FINCH'S Patent Dovetailed and other kinds of WROUGHT IRON RAILWAY WHEELS, with, or without the finished Axles, for Locomotives and for Passenger and Merchandise Cars, also Wrought Iron Railway Chairs, Railway Spikes, etc.

To the Managers of Railways, Engineers and others: Gentlemen:—We, FINCH & WILLEY, Engineers, Liverpool, Manufacturers of the above articles, respectfully inform you that we have this day appointed Mr. WM. BAILEY LANG, of Boston, as our sole Agent for the sale of said articles, and the transaction of our business in the United States of America, and for whom we solicit your kind attention and patronage.

For FINCH & WILLEY,
JOHN FINCH, Sen.

Boston, April 11, 1851.

Having accepted the above Agencies, I beg leave to solicit your orders, which shall at all times receive my prompt and careful attention. Please address all communications either to MESSRS. JOHN FINCH & SONS or MESSRS. FINCH & WILLEY, Liverpool; or to me, at my Steel Warehouse, No. 9 Liberty Square, Boston. Yours very respectfully,

WM. BAILEY LANG.

Boston, April 11, 1851.

The following are testimonials of the quality of FINCH & WILLEY'S WROUGHT IRON RAILWAY WHEELS from the Yorkshire and Lancashire Railway Co., one of the largest in Great Britain, and from the London and North Western Railway Co., the largest Railway Company in the world.

LONDON AND NORTH WESTERN RAILWAY,
(Northern Division),
WAGON DEPARTMENT, ORDELL LANE,
Manchester, January 4, 1851.

Gentlemen:—I have very great pleasure in bearing my testimony to the excellent quality of your Wrought Iron Railway Wheels.

This Company have many of them now in use on their lines, and during my experience, as their Superintendent, which is now upwards of 9 years standing, I have not known any of them to fail during that time.

I am, Gentlemen, yours, truly,
OWEN OWENS.
MESSRS. FINCH & WILLEY,
Windsor Foundry.

LANCASHIRE AND YORKSHIRE RAILWAY,
Wagon Department, Jan. 3, 1851.

Messrs. Finch & Willey,
Gentlemen: In reply to your request writing me to give my opinion of the 700 sets of Wrought Iron Wheels you furnished this company during the years 1847 and 1848, I have much pleasure in stating that we have not had a single instance of your Wheels failing in any respect, and I consider them equal if not superior to any Wheels we have on this line of railway. The Tires being LOWMOOR iron, 1½ inch thick, I have no doubt they will run under ordinary goods' wagons 12 years without any repairs more than the tires turning up. I am Gentlemen,

Yours, truly, WM. EMMETT.

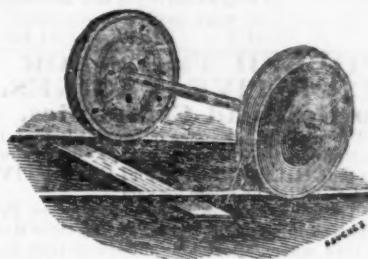
NOTE.—4 Wheels and 2 Axles are one set, consequently this order contained 2,000 WHEELS and 1,400 AXLES; value over \$100,000.

Boston Locomotive Works,

—Late Hinkley & Drury—
No. 380 Harrison Avenue,
BOSTON.

Locomotive and Stationary Steam Engines; Boilers; Iron, Brass, Copper and Composition Castings; Coppersmith's Work, and all kinds of Railroad Machinery furnished at short notice.

ALSO



Van Kuran's Improved Railroad Wheel,

Patented May 1, 1849. Manufactured under the personal superintendence of the Patentee, as above.

Orders for any quantity of wheels executed with dispatch, and wheels and axles fitted in the very best manner and at the lowest rates. Address

DANIEL F. CHILD, Treasurer, Boston.



Providence Tool Co.,

MANUFACTURERS OF
Plane Irons, Tooth Irons, Soft Moulding and Rabbet Irons, Cornice Irons, Plow Bits, and Planing Machine Knives:

NUTS, WASHERS AND BOLTS.

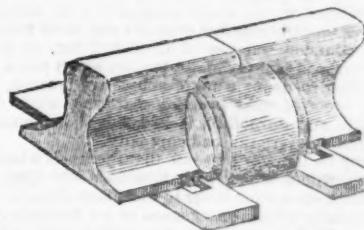
—ALSO—

PLATE HINGES AND PICK AXES. They are prepared to execute orders for all descriptions of Cold Punching and Job Work.

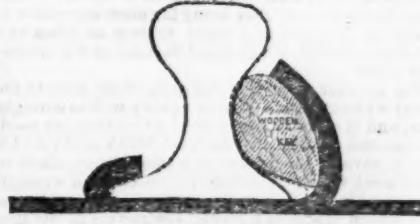
W.M. FIELD, Agent. RUFUS WATERMAN, Treas.

PROVIDENCE, R. I.

Railroad Iron, SPIKES, AND WROUGHT IRON CHAIRS.



THE Undersigned, Agent for Manufacturers, is authorized to contract for Welsh Railroad Iron of the best quality, and deliverable at any port on favorable terms, also Spikes and Wrought Iron Chairs, made from the best iron, and of any pattern and weight. The new Wrought Iron Chair, with the introduction of a "Key," as per the annexed plan, will be found a great improvement on the old pattern.



Boiler Plates of superior quality, perfect regularity in the squaring and thickness, and made with great care. Samples can be seen at the office, No. 20 Beaver st. CHARLES ILLIUS.

RAILROAD CAR MANUFACTORY
TRACY & FALES,
GROVE WORKS, HARTFORD, CONN.
Passage, Freight and all descriptions of
RAILROAD CARS,
AS WELL AS
LOCOMOTIVE TENDERS,

Made to order promptly.

The above is the Largest Car Factory in the Union. In quality of Material, and in Workmanship, Beauty and Good Taste, as well as Strength and Durability, we are determined our work shall be unsurpassed.

JOHN R. TRACY. THOS. J. FALES.

**CHILLED TIRES FOR
LOCOMOTIVE ENGINES.
To Railroad Companies.**

THE Undersigned, Assignee of Letters Patent, respectfully invites the attention of Railroad Companies to the CHILLED TIRES for LOCOMOTIVE ENGINES, which he offers for sale.

These Tires were first introduced by Messrs. Perkins & McMahon, upon the Baltimore and Ohio Railroad, in 1843, where, after a long and severe trial, they were generally adopted, on both passenger and freight engines, and now have entirely superseded Wrought Tires on that road, on which are many engines of the heaviest class, which ascend grades of eighty-five feet per mile, taking with them one hundred and twelve tons, exclusive of cars. This performance shows in some measure the adhesive character and strength of the Tire.

During a service of seven years, these Tires have very much exceeded in durability those of wrought iron, while their first cost, and expense of repairs, is more than fifty per cent. less. They also retain more equally their diameter and proper form of tread, which is a point of much value in engines with coupled wheels.

It is believed these Tires are peculiarly well adapted to freight engines, as the objection to coupling the wheels of locomotives is the increased friction, arising principally from the unequal wear of wrought tires; and hence most of the freight engines where wrought tires are used, have but four wheels as drivers, with frequently a weight of sixteen tons, or more, upon them, which may be of no disadvantage to the engine, although its effect upon the track is like a car with sixteen tons upon four wheels, and it is presumed no one would permit cars so heavily loaded to pass over their road.

As Chilled Tires wear more uniformly than those of wrought iron, there can be no doubt when these are used, that the weight necessary for adhesion may be distributed upon more driving wheels, without any material disadvantage to the engine, and thus placing less weight upon a single point, would relieve the track, and secure, to a great extent, the object sought to be gained by the plan so frequently proposed, of using light engines, which would bring with it the necessity of increasing the number of trains and train hands.

The complete success of Chilled Tires upon the Baltimore and Ohio road, for the last seven years, and upon other roads for a more subsequent period, is a strong proof of their practical character, while their cheapness and durability, it is believed, recommend their trial by every railroad company.

It may be thought by some that the whole wheel for strength, would be preferable to wheels with tires, but experience shows the latter to be a much stronger and more durable wheel, on account of its freedom from tension, which is never the case with a whole wheel. That TENSION has much to do with the breaking of wheels and tires, may be inferred from the fact, that a set of chilled tires, five feet diameter, on a first class passenger engine, have been in constant service during the past winter, on one of our Eastern roads, and have withstood the severities of the season, where whole wheels and wrought tires have broken. And it may be proper to remark, that wherever chilled tires have been introduced, whole wheels as drivers are invariably abandoned, they being far more expensive to maintain, as there is a crank to form as often as a wheel is renewed, which is not the case on the renewal of a tire.

The peculiar manner of fastening these tires to the wheel without shrink, applies equally well to wrought tires, and is of much importance where they are used, as it secures them against the TENSION or STRAIN they receive by the present plan of shrinking them to the wheels, which undoubtedly is the cause of wrought tires breaking so frequently, particularly in cold weather, which produces a greater contraction of the tire, thereby increasing the strain. This plan makes the tire perfectly secure upon the wheel, and is attended with less expense, as will be seen by the following testimonias, which are respectfully submitted.

Lowell, March 1851.

L. B. TYNG.

TESTIMONIALS.

Baltimore and Ohio R. R. Office, Jan. 2, 1850.

Mr. L. B. TYNG, Lowell, Mass.—Sir: Your favor of the 26th ult., is before me, asking my opinion of the Chilled Cast Iron Tires, of Messrs. Perkins & McMahon, patentees. I do not hesitate to speak favorably of them, nor to say that I would give them the preference over wrought iron tires, whenever the adhesive tenacity of the latter to the rails is not all called for, there being somewhat less adhesion to the chilled wheel.

This can, however, scarcely be called a practical point, as nearly all of the Passenger Engines now in use have a surplus of adhesion, and nearly all Freight Engines being provided with the sand box, for emergencies arising from sharp curves, heavy grades or wet rails.

The Chilled Tire is very much cheaper in first cost, will last longer, and offers a facility for putting it on the wheel, rendering comparison with the wrought iron tire an absurdity—it not being necessary even to take the wheels from the machine for the purpose.—Many of them are in successful use on this road, and I consider its curves and other peculiarities the most severe of all existing tests. One set of five feet in diameter, has run 50,000 miles under one of our Passenger Engines, and will to all appearance, run as many more; and, in the mean time, they have not cost a dollar for repairs or adjustment.

It may be suggested that they might not stand a Northern frost. This is possible; but I believe otherwise, as the weather here is occasionally as severe as in Boston, and if I had charge of a northern road, after the experience I have had here, I would make their trial one of my very first acts.

Respectfully your Ob't Serv't, WM. PARKER, General Supt., etc.

January 29, 1851.

Philadelphia, Wilm. and Balt. R. R. Office, Wilmington, Del.

Mr. L. B. TYNG—Sir: We have used the solid Cast Iron Chilled Wheel, and Cast Iron Chilled Tire, for engine drivers, on this road since 1842. When wrought iron tires under new engines, purchased from time to time, wear out, I invariably replace them with the Chilled Tire of Messrs. Perkins & McMahon, patentees.

These Tires will last, on the average, three times as long as wrought tires; seldom requiring renewals under three years, and lasting much longer usually. We have a set which has been in constant use for five years, and still in fair order. The adhesion supplied by the Chilled Tires, I find in practice with engines of the same model and weight, to be equal to that given by wrought tires. This is certainly a fact, though not an acknowledged one, in general. Those who think otherwise, will in time change their opinions.

I am of opinion that the Chilled Tire is as safe as the wrought, at any temperature. In eight years use, we have broken but one tire out of more than fifty, and that by a violent concussion on the occasion of a run off.

The use of the Chilled Tire, and the ease and rapidity with which it may be replaced, would certainly enable a road to do the same amount of work with fewer engines—since but little time would be lost in laying up an engine for new tires, or for turning down old ones, as must be done when wrought tires are used.

I am yours respectfully,

I. R. TRIMBLE,
Engineer and General Supt.

Office Eastern R. R., Salem, Dec. 23, 1850.

L. B. TYNG, Esq.—Sir: Your favor of Nov. 30th, inquiring respecting the Chilled Cast Iron Tires, came duly to hand, and in answer, I will say, that this road have in use one set cast and fitted to the wheel, by Messrs. Bush & Lobdell, upon a twenty ton first class Passenger Engine, which has run in eight months, 26,639 miles, and to all appearance, are about as good as when they first commenced running.

In regard to the comparative expense of the cast or wrought iron tires, I do not hesitate to say that the difference would be vastly in favor of the former.

I have ordered a second set, and they will be put on to the engine immediately. Respectfully,

JOHN KINSMAN, Supt. E. R. R.

Chilled Tires for the various sized wheels, or wheels with either chilled or wrought tires fitted up upon this plan, may be had of the following persons:

ALDRICH, TYNG & Co, Lowell, Mass.
SMITH & PERKINS, Alexandria, Va.

Rights for using Tires upon the above plan, may be had on reasonable terms, of L. B. TYNG, Lowell, and at N. York.

Railroad Iron.

THE UNDERSIGNED, HAVING made arrangements abroad, are prepared to contract for the delivery of Foreign rails, of approved brands upon the most favorable terms.

They will also make contracts for American rails, made at their Trenton works, from Andover Iron, in whole or in part, as may be agreed upon.

They are prepared to furnish Telegraph, Spring and Market Wire; Braziers and Wire Rods; Rivets and Merchant Bars to order, all made exclusively from Andover Iron. The attention of parties who require iron of the very best quality for special purposes, is respectfully invited.

COOPER & HEWITT,
17 Burling Slip, New York.

February 15, 1850.

Railroad Lanterns.

COPPER and Iron Lanterns for Railroad Engines, fitted with heavy silver plated Parabolic Reflectors of the most approved construction, and Solar Argand Lamps; manufactured by

HENRY N. HOOPER & CO.,
No. 24 Commercial St. Boston.

August, 16, 1849. 6m33

Railroad Iron.

THE UNDERSIGNED ARE PREPARED TO contract for the delivery of English Railroad Iron of favorite brands, during the Spring. They also receive orders for the importation of Pig, Bar, Sheet, etc. Iron.

THOMAS B. SANDS & CO.,
73 New street,

New York.

February 3, 1849.

Glendon Refined Iron.

Round Iron, Band Iron, Hoop Iron,
Square Flat Scroll
Axles, Locomotive Tyres,

Manufactured at the Glendon Mills, East Boston, for sale by GEORGE GARDNER & CO.,
5 Liberty Square, Boston, Mass.

Sept. 15, 1849. 3m37

ENGINEERS.

Atkinson, T. C.,

Mining and Civil Engineer,
Orange and Alexandria Railroad, Alexandria, Va.

Clement, Wm. H.,

Little Miami Railroad, Cincinnati, Ohio.

Cozzens, W. H.,

Engineer and Surveyor, St. Louis, Mo.

Alfred W. Craven,

Chief Engineer Croton Aqueduct, New York.

Floyd-Jones, Charles,

Alton and Sangamon Railroad, Alton, Illinois.

Gay, Edward F.,

Columbia and Philadelphia Railroad, Philadelphia Pa.

Gilbert, Wm. B.,

Rutland and Burlington Railroad, Rutland, Vt.

Gzowski, Mr.,

St. Lawrence & Atlantic Railroad, Montreal, Canada.

Grant, James H.,

Nashville and Chattanooga R. R., Nashville, Tenn.

S. W. Hill,

Mining Engineer and Surveyor, Eagle River, Lake Superior.

Holcomb, F. P.

Southwestern Railroad, Macon, Ga.

Latrobe, B. H.,

Baltimore and Ohio Railroad, Baltimore, Md.

Miller, J. F.,

Buffalo and Conhocton Valley Railroad, Bath, N. Y.

Morris, Elwood,

Schuylkill Navigation, Schuylkill Haven, Pa.

Nott, Samuel,

Lawrence and Manchester Railroad, Boston,

Osborne, Richard B.,

Civil Engineer, Philadelphia.

Prichard, M. B.,
East Tennessee and Georgia R. R., Cleveland, Tenn.

W. Milnor Roberts,
Bellefontaine and Indiana Railroad, Marion, Ohio.

Roberts, Solomon W.,
Ohio and Pennsylvania Railroad, Pittsburgh, Pa.

Sanford, C. O.,
South Side Railroad, Virginia.

Schlatter, Charles L.,
Northern Railroad (Ogdensburg), Malone, N. Y.

Steele, J. Dutton,
Pottstown, Pa.

Trautwine, John C.,
Civil Engineer and Architect, Philadelphia.

Tinkham, A. W.,
United States Fort, Bucksport, Me.

Troost, Lewis,
Alabama and Tennessee Railroad, Selma, Ala.

Whipple, S.,
Civil Engineer and Bridge Builder, Utica, N. Y.

HOTELS.

DAVIS'S ALHAMBRA HALL,
No. 136 Pratt street,
BALTIMORE.

Exchange Hotel,
Adjoining Eastern Railroad Depot,
BUFFALO, N. Y.

BY.....**FISK & SPERRY,**
Late of Delevan House, Albany.

MANSION,
Corner of Maine and Exchange Streets,
P. DORSHIMER. **BUFFALO.**

Barnum's City Hotel,
MONUMENT SQUARE, BALTIMORE.
This Extensive Establishment, erected expressly
for a Hotel, with every regard to comfort and convenience,
is situated in the centre and most fashionable part of the city, and but a few minutes' walk from the Railroad Depots and Steamboat Landings.

The House has lately undergone a thorough repair,
embracing many valuable improvements, and will accommodate 250 Guests.

BARNUM & CO.

American Hotel,
Pratt street, opposite the Railroad Depot,
BALTIMORE.

HENRY M. SMITH..... Proprietor.
Late of the Exchange & St. Charles Hotels, Pittsburgh

Washington Hotel,
BY JOHN GILMAN,
\$1 Per Day.
No. 206 Pratt street, (near the Depot),
BALTIMORE.

GUY'S United States Hotel,
(Opposite Pratt street Railroad Depot),
BALTIMORE.
JOHN GUY. WILLIAM GUY.

DUNLAP'S HOTEL,
On the European Plan,
NO. 135 FULTON STREET,
Between Broadway and Nassau St.,
NEW YORK.

JONES' HOTEL,
NO. 152 CHESTNUT STREET,
PHILADELPHIA.
BRIDES & WEST, Proprietors.

Fountain Hotel,
LIGHT STREET, BALTIMORE,
MURSTON..... Proprietor.

BUSINESS CARDS.

Walter R. Johnson,
CIVIL AND MINING ENGINEER AND ATTORNEY FOR PATENTS. Office and Laboratory, F. S. T., oposite the Patent office, Washington, D. C.

Lithography.

JOHN P. HALL & CO.,
161 Main st., Buffalo, (Commercial Advertiser Build.)

Are prepared to execute all kinds of Lithography in good style and at reasonable rates. Particular attention will be paid to Engraving Railroad Maps, Engineer's Plans and drafts, etc., and orders in this line are respectfully solicited.

Cumberland, (Md.) Coals for Steaming, etc.

ORDERS RECEIVED FOR AND FILLED
by J. COWLES, 27 Wall St., N. Y.

J. & L. Tuckerman,
IRON COMMISSION MERCHANTS,
AND MANUFACTURERS OF
ULSTER BAR & POUGHKEEPSIE PIG IRON,
69 WEST STREET,
NEW YORK

Henry I. Ibbotson,
IMPORTER of Sheffield and Birmingham Goods.
Also, Agent for the Manufacture of Telegraph Wire.
218 PEARL ST., NEW YORK.

Charles T. Jackson, M. D.,
STATE ASSAYER, late Geologist to Maine, Rhode Island, New Hampshire, and the United States, offers his services to his friends and the public in making any Chemical, Mineralogical or Geological researches that may be required for the improvement of Agriculture and the Manufacturing Arts. Particular attention will be paid to the exploration of mines and to assaying of ores of the metals.

State Assayer's office, 31 Somerset st.
Boston Sept. 3, 1850.

STEEL AND FILES.

R. S. Stenton,
20 CLIFF STREET, NEW YORK,

AGENT FOR

J. & RILEY CARR,
BAILEY-LANE WORKS, SHEFFIELD,
Manufacturers of Cast, Shear, German, Blister, and
Spring Steel,

Of all descriptions, Warranted Good.

FILES.

Manufacturers of Machinists' Warranted Best Cast Steel Files, expressly for working upon Iron and Steel, made very heavy for recutting.

E A full Stock of Steel and Files at all times on hand.

6m4

Dudley B. Fuller & Co.,
IRON COMMISSION MERCHANTS,
No. 139 GREENWICH STREET,
NEW YORK.

Manning & Lee,
GENERAL COMMISSION MERCHANTS,
NO. 51 EXCHANGE PLACE,
BALTIMORE.

Agents for Avalon Railroad Iron and Nail Works, Maryland Mining Company's Cumberland Coal CED—'Potomac' and other good brands of Pig Iron.

Samuel Kimber & Co.,
COMMISSION MERCHANTS

WILLOW ST. WHARVES, PHILADELPHIA.
A GENTS for the sale of Charcoal and Anthracite
A Pig Iron, Hammered Railroad Car and Locomotive Axles, Force Pumps of the most approved construction for Railroad Water Stations and Hydraulic Rams, etc., etc.

July 27, 1849.

James Herron, Civil Engineer,
OF THE UNITED STATES NAVY YARD,
PENSACOLA, FLORIDA.,
PATENTEE OF THE

HERRON RAILWAY TRACK.
Models of this Track, on the most improved plan, may be seen at the Engineer's office of the New York and Erie Railroad.

PLUSHES

FOR

Railway Cars & Omnibuses.

F. S. & S. A. MARTINE,

112 WILLIAM ST., NEAR JOHN.

ARE now receiving a large and complete assortment of Plain and Figured PLUSHES, of their own importation, which will be sold at the lowest market price, viz: Crimson, Maroon, Scarlet, Green, Blue, Purple, etc.

ALSO—CURLED HAIR, the best manufactured in market.

To Railroad Companies, Machinists, Car Manufacturers, etc., etc.

CHARLES T. GILBERT,

NO. 80 BROAD ST., NEW YORK,

IS prepared to contract for furnishing at manufacturer's prices—

Railroad iron,

Locomotive Engines,

Passenger and Freight Cars,

Car Wheels and Axles,

Chairs and Spikes.

Orders are invited; and all inquiries in relation to any of the above articles will receive immediate attention.

Manufacture of Patent Wire ROPE AND CABLES,

For Inclined Planes, Suspension Bridges, Standing Rigging, Mines, Cranes, Derrick, Tillers, &c., by

JOHN A. ROEBLING, Civil Engineer,

TRENTON, N. J.

FORGING.

Ranstead, Dearborn & Co.,

MANUFACTURERS OF

LOCOMOTIVE CRANKS AND CAR AXLES,

ALSO

WROUGHT IRON SHAFTING,
And All Kinds of Hammered Shapes.
Office 25 Foster's Wharf, Boston.

Samuel D. Willmott,

MERCHANT, AND MANUFACTURER OF
CAST STEEL WARRANTED SAWS,
—AND FILES—

IMPORTER OF THE
GENUINE WICKESLY GRINDSTONES
NO. 8 LIBERTY STREET,
NEW YORK.

Railroad Instruments.

THEODOLITES, TRANSIT COMPASSES,
and Levels, with Fraunhofer's Munich Glasses,
Surveyor's Compasses, Chains, Drawing Instruments,
Barometers, etc., all of the best quality and workmanship, for sale at unusually low prices, by

E. & G. W. BLUNT,

No. 179 Water St., cor. Burling Slip.
New York, May 19, 1849.

IRON.

Iron.

Pig Iron, Anthracite and Charcoal; Boiler and Flue Iron, Spring and Blistered Steel, Nail Rods, Best Refined Bar Iron, Railroad Iron, Car Axles, Nails, Stove Castings, Cast Iron Pipes of all sizes, Railway Chairs of approved patterns for sale by

COLEMAN, KELTON & CAMPBELL,
109 N. Water St., Philadelphia.

Iron Store.

THE Subscribers, having the selling agency of the following named Rolling Mills, viz: Norristown, Rough and Ready, Kensington, Philadelphia, Pottsgrove and Thorndale, can supply Railroad Companies, Merchants and others, at the wholesale mill prices for bars of all sizes, sheets cut to order as large as 58 in. diameter; Railroad Iron, domestic and foreign; Locomotive iron welded to given size; Chairs and Spikes; Iron for shafting, locomotive and general machinery purposes; Cast, Shear, Blister and Spring Steel; Boiler rivets; Copper; Pig iron, etc., etc.

MORRIS, JONES & CO.,

Iron Merchants,

Schuylkill 7th and Market Sts., Philadelphia.
August 16, 1849.

173

Bowling Iron. Stamped B.O.

Railway Tire Bars
Locomotive and other Axles
Boiler Plates
and every other description of this superior Iron.

The subscribers, agents for the sale of Bowling Iron, are prepared to execute orders for importation, especially for railway and machinery uses, with despatch from the manufacturers.

RAYMOND & FULLERTON, 45 Cliff st.

**Ibbotson, Brothers & Co's
CELEBRATED CAST STEEL**

AND

Best Cast Steel Royal Improved Files, well known as better adapted for Engineers' and Machinists' purposes than any now in use in the United States.

Every description of Square, Octagon, Flat and Round Cast Steel, Sheet, Shovel and Railway Spring Steel, etc., and Steel to order for any purposes—manufactured at their works in Sheffield—and universally known by the old stamp "Globe."

HENRY I. IBBOTSON, Agent,
218 Pearl st., New York.

**Smith & Tyson,,
IRON COMMISSION MERCHANTS,
BALTIMORE.**

REFINED Juniper Charcoal Billet Iron for Wire.
Do. for Bridging, of great strength.

Flat Rock, Boiler and Flue Iron, rolled to pattern.
Elba, Wheel Iron of great strength and superior chilling properties. Elba Forge Iron, American Shot Iron, Cut Nails, Spikes and Brads, Nail and Spike rods, Railroad Spikes of superior quality, Wrought Chain plates of any pattern, punched or plain.

**WILLIAM JESSOP & SONS,
CELEBRATED CAST-STEEL.**

The subscribers have on hand, and are constantly receiving from their manufacturer,

PARK WORKS, SHEFFIELD,
Double Refined Cast Steel—square, flat and octagon.
Best warranted Cast Steel—square, flat and octagon.
Best double and single Shear Steel—warranted.
Machinery Steel—round.

Best and 2d gy. Sheet Steel—for saws and other purposes.

German Steel—flat and square, "W. I. & S." "Eagle" and "Goat" stamps.

Genuine "Sykes," L Blister Steel.
Best English Blister Steel, etc., etc., etc.

All of which are offered for sale on the most favorable terms by

WM. JESSOP & SONS,

91 John street, New York.

Also by their Agents—

Curtis & Hand, 47 Commerce street, Philadelphia.
Alex'r Fullerton & Co., 119 Milk street, Boston.
Stickney & Beatty, South Charles street, Baltimore.

May 6, 1848.

Railroad Iron.

B. O. Railway Tires, Railway Wheels,
Scotch Pig Iron, Tin Plates and Banca Tin,
Muntz Patent Metal Sheathing,
Baltimore Copper.

Contracts for Rails made on behalf of the manufacturers, for delivery at any ports in the United States, at fixed prices.

Bowling Tires and Tire Bars and Scotch Pigs imported to order.

Muntz's Ship-sheathing, and a general stock of Tin Plates and Banca Tin in store, and for sale by

RAYMOND & FULLERTON, 45 Cliff st.

FRONDALE PIG METAL, MANUFACTURED
and for sale by the Bloomsburg Railroad Iron Co.
LINDLEY FISHER, Treasurer.
75 N. Water St., Philadelphia.

Car Wheel Iron.

THE celebrated cold blast "Conowingo" Pig Iron, for Railroad Wheels, Chilled Rolls, etc., for sale by

E. PRATT & BROTHER,

Baltimore, Md.

Railroad Iron.
3,000 TONS C. L. MAKE 634 lbs. per yard,
now landing and to arrive.

Also contracts made for future delivery of above superior make English Iron.

300 Tons Banks Best Iron, Round, Square and Flat.
200 " English Bar " " " " "

10 " 9-16 Square Iron for Railroad Spikes.

For sale in lots to suit purchasers by

DAVID W. WETMORE.

New York, March 26, 1850.

Railroad Iron.

CONTRACTS made by the subscribers, agents for the manufacturers, for the delivery of Railway Iron, at any port in the United States, at fixed prices, and of quality tried and approved for many years, on the oldest railways in this country.

RAYMOND & FULLERTON, 45 Cliff st.

**JOHNSON, CAMMELL & Co's
Celebrated Cast Steel,**

AND

ENGINEERING AND MACHINE FILES, which for quality and adaptation to mechanical uses, have been proved superior to any in the United States. Every description of square, octagon, flat and round cast steel, sheet, shovel and railway spring steel, best double and single shear steel, German steel, flat and square, goat stamps, etc. Saw and file steel, and steel to order for any purposes, manufactured at their Cyclops Steel Works Sheffield.

JOHNSON, CAMMELL & CO.,
24 Cliff St., New York.

November 23 1843.

Bowling Tire Bars.

40 Best Flange Bars 5½x2 inches, 11 feet long.
40 " 5½x2 " 7 feet 8 in. long.
40 " Flat " 6x2 " 11 feet long.
40 " " 6x2 " 7 feet 8 in. long.

Now in store and for sale by

RAYMOND & FULLERTON,
45 Cliff street.

**Wheel, Forge and Foundry
Iron.**

LOCUST GROVE Wheel Iron of great strength and superior chilling property.

Balt. Charcoal Forge Iron, from Patuxent, Curtis Creek and Gunpowder furnaces.

Elkridge Foundry Iron, of superior strength and softness. Anthracite and Charcoal Iron from Pennsylvania and Virginia. Gas and Water Pipes, Lamp Posts from Elkridge furnace.

LEMMON & GLENN,
5m9 62 Buchanan's Wharf, Baltimore.

Railroad Iron.

1650 Tons, weighing about 61 lbs. per yard, 40 tons, weighing about 52 lbs. per yard, and 825 tons, weighing about 53 lbs. per yard, of the latest and most approved patterns of T rail, for sale by

BOORMAN, JOHNSTON & CO.,

119 Greenwich street.

New York, Aug. 26, 1850.

N.B.—B. J. & Co are also prepared to take contracts for English rails, delivered in any of the Atlantic ports of the United States.

Railroad Iron.

THE Undersigned, Agents for Manufacturers, are prepared to contract to deliver Rails of superior quality, and of any size or pattern, to any ports of discharge in the United States.

COLLINS, VOSE & CO.,

74 South St.

New York, June 1, 1850.

Tredegar Iron Works.

ROLLING MILL FOUNDRY AND MACHINE SHOPS. The undersigned continues to manufacture at his Works in this city (from best charcoal metal) Bar Iron of every description, embracing Rounds and Squares, from 4 to 5 inches diameter. Flats, from 4 to 7 inches, all thicknesses. Bands and Scrolls, all sizes. Boiler plate and Plough Iron. Railroad and Locomotive Axles and Tires. Locomotive Frames, Spikes and Plates. Hoops, Ovals, Half Ovals, Half Rounds, Angle, T, L, and indeed every description of Iron usually manufactured, all of which he warrants to be equal to any made in this country. He also manufactures at his Foundry and Machine Shops all descriptions of Railroad Work, say, Locomotives, Railroad Wheels and Axles complete and ready for the road, Railroad Chairs, etc. Also, Marine and Stationary Engines all sizes, Sugar mills and Engines, Horse mills, and every kind of Machinery usually required for the operations of the country. He has paid particular attention to getting up machinery, etc., for Gold Mine operations, and those in want of such work might find it to their advantage to give him a call.

J. R. ANDERSON.

Richmond, Va., Sept. 10, 1850.

CUT NAILS OF BEST QUALITY, BAR IRON (including Flat Rails) manufactured and for sale by

FISHER, MORGAN & CO.,

75 N. Water St., Philadelphia.

Car Wheel Iron.

100 Tons "Columbia" No. 2 Cold Blast Charcoal Iron.

300 Tons "Salisbury" No. 1, do. do.

For sale by CHARLES T. GILBERT,

No. 80 Broad st.

New York, Sept. 21, 1850.

Railroad Spikes.

THE subscribers are prepared to make and execute contracts for Railroad Spikes of a superior quality, manufactured by the New Jersey Iron Company, at Boonton. DUDLEY B. FULLER & CO.

139 Greenwich st. corner of Cedar.

**S. S. Keyser & Co.,
IRON WAREHOUSE,**

Corner of South and Pratt Streets,

BALTIMORE, MD.

Selling Agents for the Rough and Ready Bar Iron and Elk Boiler and Flue Iron Rolling Mills, Sarah and Taylor Furnaces, and Wrightsville Hollow Ware Foundry, and Dealers in Bar and Sheet Iron, and Cast, Sheer, German, Blister, Spring and Electrised Steel, etc., etc.

Railroad Spikes, Boiler Rivets, etc.

THE Subscribers, Agents for the sale of James S. Spencer's, Jr., Railroad and Boat Spikes, Boiler Rivets, and Wrought Iron Chairs for Railroads, made at his Works near this city, will execute all orders with promptness, despatch, and of the best quality.

ALSO IMPORTERS of English refined and Merchant bar Iron; Extra refined Car and Locomotive Axles (from 3½ to 6½ inches in diameter); B. O. Locomotive Tire (welded by Baldwin). Also, supply Boiler and Flue Iron cut to pattern or otherwise.—Spring, Shear, and Cast Steel, etc., etc., etc.

T. & E. GEORGE.

Philadelphia, November 14, 1850.

Railroad Iron.

THE Undersigned, Agents for Manufacturers, are prepared to contract for the delivery of English, Welsh and Scotch Rails, of any pattern and weight, also for every description of English, Welsh, Scotch, and Swedish Iron, Railway Chairs and Spikes, Rivets, Bolts, Nuts, Washers, Chain Cables, Anchors, Tin Plates, German Spelter, Iron Castings, and every description of Machinery.

WILLIAM BIRD & CO.,
Iron and Tin Plate Merchants,
44 Wall st., New York.

And at 5 Martin's Lane, City, London,
and 140 Buchanan st. Glasgow.

July 27th, 1850.

**Railroad Spikes, Wrought
Chairs and Fastenings.**

THE subscribers continue to manufacture, with increased facilities, Hook and Flat Head Railroad Spikes and Chairs. The points being FINISHED BY HAND, have a long taper, and sharp point, and are much superior to those made entirely by machinery.

We are also prepared to furnish Wrought Chairs, Clamps and Fastenings of every description, either punched or plain. The best quality of refined iron is used in the above articles, and our prices will be made as favorable as any in the country.

The patent Clinch Spike will be found an improvement to secure the rail at the joints.—They drive in the manner shown and are not liable to work loose.

All communications, addressed to the undersigned, will meet with prompt attention.

SMITH & TYSON,
No. 25 South Charles st., Baltimore Md.

TO RAILROAD COMPANIES, CAR MANUFACTURERS, etc.

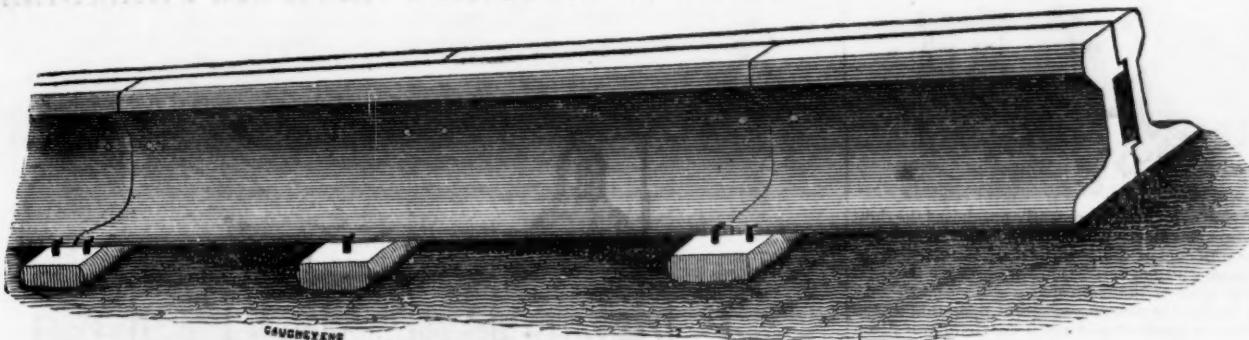
THE Undersigned hereby gives public notice, that the Commissioner of Patents, pursuant to his decision in relation thereto, on the 8th day of October, 1850, issued to him a Patent for the sole right to manufacture, and exclusive use of the INDIA RUBBER CAR SPRING, on account of priority of invention of said Spring.

F. M. RAY,

New York, Oct. 23, 1850.

2000

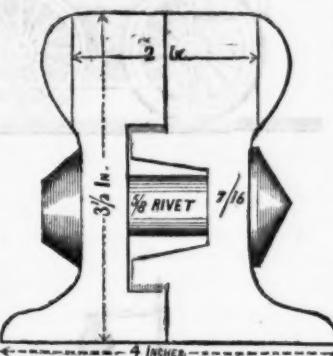
PATENT COMPOUND RAIL.



THE UNDERSIGNED NOW OFFER TO THE Railroad Public a new Compound Railroad Bar, which possesses, as they believe, a decided superiority over every kind now in use. The Cuts annexed will give a good idea of the form of the Rail, and the mode of combination.

This Rail has now been in use on the New York and Erie and the Utica and Schenectady Railroads for nearly two years, and has proved itself to be a durable and continuous rail, realizing the advantages of a theoretically perfect rail, over the one in common use. We invite the attention of Railroad Companies to a careful examination of the merits of the form now offered.

The advantages of this Rail are: first, it effects a saving of from 25 to 50 per cent. in the wear and tear of the machinery; secondly, it saves to a vastly greater extent in the repairs of track; thirdly, it secures a much higher rate of speed with the same power; and what is of still



greater importance, it offers complete protection against most of the accidents to which companies are liable. For these reasons, it is believed to be not only the best, but the cheapest rail that can be used. In enumerating its advantages, the proprietors only repeat the statements of competent persons, who have had the best opportunities of judging of its merits.

This improved Rail is now being manufactured at the Works of the Mount Savage Iron Co. in Maryland. Any communications or enquiries addressed to either of the undersigned will receive prompt attention.

J. F. WINSLOW, President,
Troy, N. Y.
ERASTUS CORNING, Albany.
WARREN DELANO, Jr., N. Y.
JOHN M. FORBES, Boston.
ENOCH PRATT, Baltimore.

April 8, 1851.

Fagotted Car and Engine Axles

FORGED by RANSTEAD, DEARBORN & Co.,
Boston, Mass.

These Axles enjoy the highest reputation for excellence, and are all warranted.

Iron Trade of Pennsylvania.

DOCUMENTS and Statistics relating to the Manufacture of Iron in the State of Pennsylvania—giving a history of the manufacture from its commencement to this date, illustrated by diagrams. Also tables giving the address and capacity of every establishment in the State. Prepared by direction of the late convention of the trade held in Philadelphia. For sale by

LINDSAY & BLACKISTON, Philadelphia.
FIELDING LUCUS, Jr., Baltimore.

HENRY G. NICHOLS, 79 Water St., N. Y.
or at this office—price \$1 00.

It will be sent by mail to any order enclosing the money, and post paid.

Ulster Iron.

THE ULSTER IRON WORKS, Saugerties, N. Y., continue in full operation. Orders for round, square, flat, band, hoop and scroll iron, will be received and promptly executed by

J. & L. TUCKERMAN,
69 West St., New York.

India-rubber for Railroad Cos.

RUBBER SPRINGS—Bearing and Buffer-Filler's Patent—Hose from 1 to 1 1/2 inches diameter. Suction Hose. Steam Packing from 1 1/16 to 2 in thick. Rubber and Gutta Percha Bands. These articles are all warranted to give satisfaction, made under Tyer & Helm's patent, issued January, 1849. No lead used in the composition. Will stand much higher heat than that called "Goodyear's," and is in all respects better than any in use. Proprietors of railroads do not be overcharged by pretenders.

HORACE H. DAY,

Warehouse 23 Courtlandt street
New York, May 21, 1849.

Railroad Iron.

2000 TONS T RAILS, of desirable pattern, arrived, and to arrive, for sale by
RAYMOND & FULLERTON,
45 Cliff st.

Railroad Iron.

THE MOUNT SAVAGE IRON WORKS, ALLEGHENY county, Maryland, having recently passed into the hands of new proprietors, are now prepared, with increased facilities, to execute orders for any of the various patterns of Railroad Iron. Communications addressed to either of the subscribers will have prompt attention. J. F. WINSLOW, President

TROY, N. Y.
ERASTUS CORNING, Albany.
WARREN DELANO, Jr., N. Y.
JOHN M. FORBES, Boston.
ENOCH PRATT, Baltimore, Md

November 6, 1849.

Railroad Iron.

THE SUBSCRIBERS ARE PREPARED TO take orders for Railroad Iron to be made at their Phoenix Iron Works, situated on the Schuylkill River, near this city, and at their Safe Harbor Iron Works, situated in Lancaster County, on the Susquehanna river; which two establishments are now turning out upwards of 1800 tons of finished rails per month.

Companies desirous of contracting will be promptly supplied with rails of any required pattern, and of the very best quality.

REEVES, BUCK & CO.
45 North Water St. Philadelphia.

March 15, 1849

LAP-WELDED WROUGHT IRON TUBES

FOR
TUBULAR BOILERS,
FROM ONE AND A QUARTER TO SEVEN
INCHES IN DIAMETER.

THE ONLY Tubes of the same quality and manufacture as those so extensively used in England Scotland, France and Germany, for Locomotive, Marine and other Steam Engine Boilers.

THOMAS PROSSER & SON, Patentees,
28 Platt street, New York.

AMERICAN PIG IRON.

"POUGHKEEPSIE" brand, Dutchess Co., N. Y.
"GLENDON" brand, Lehigh county, Pa.
Orders for the above two well known brands will be received, and promptly executed, by

J. & L. TUCKERMAN,
69 West St., New York.

American Cast Steel.

THE ADIRONDAC STEEL MANUFACTURING CO. is now producing, from American iron, at their works at Jersey City, N.J., Cast Steel of extraordinary quality, and is prepared to supply orders for the same at prices below that of the imported article of like quality. Consumers will find it to their interest to give this a trial. Orders for all sizes of hammered cast steel, directed as above, will meet with prompt attention.

May 28, 1849.

PATENT HAMMERED RAILROAD, SHIP & BOAT SPIKES.—The Albany Iron Works have always on hand, of their own manufacture, a large assortment of Railroad, Ship and Boat Spikes from 2 to 12 inches in length, and of any form of head. From the excellence of the material always used in their manufacture, and their very general use for rail roads and other purposes in this country, the manufacturers have no hesitation in warranting them fully equal to the best spikes in market, both as to quality and appearance. All orders addressed to the subscribers at the works will be promptly executed.

JOHN F. WINSLOW, Agent.
Albany Iron and Nail Works, Troy, N. Y.
The above Spikes may be had at factory prices, at Erastus Corning & Co., Albany; Merritt, & Co., New York; E. Pratt & Bro., Baltimore, Md.

Stickney & Beatty,
DEALERS IN IRON AND IRON
MANUFACTURERS.

A GENTS for the Baltimore City Rolling Mill, (Works of Messrs. Elicott) also agents for the sale of the Laurel, Locust Grove and Gunpowder (Bal.) Forge Pig Irons; Hupp's Cold Blast Columbia Wheel Iron, Fort and anti-Eatam Pig Irons. Caledonia, Columbia and Capon Cold Blast Boiler Blooms, warranted; Wm. Jessop & Son's Steel; Old Colony and anti-Eatam Nails; Bar Iron, Boiler Plates, Hoop, Sheet, Oval, Half Oval, Horse Shoe and other Iron. Exchange Place, Baltimore.

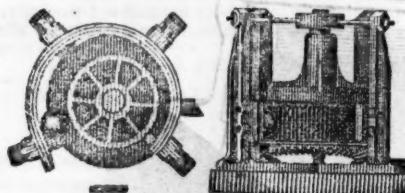
Railroad Iron.

2000 Tons, weighing 58 pounds per lineal yard, of the most approved pattern of T rails, in store and to arrive, for sale by

COLLINS, VOSE & CO.,
74 South St.,
New York, June 1, 1850.

MACHINERY.

Henry Burden's Patent Revolving Shingling Machine.



THE Subscriber having recently purchased the right of this machine for the United States, now offers to make transfers of the right to run said machine, or sell to those who may be desirous to purchase the right for one or more of the States.

This machine is now in successful operation in ten or twelve iron works in and about the vicinity of Pittsburgh, also at Phenixville and Reading, Pa., Covington Iron Works, Md., Troy Rolling Mills, and Troy Iron and Nail Factory, Troy, N. Y., where it has given universal satisfaction.

Its advantages over the ordinary Forge Hammer are numerous: considerable saving in first cost; saving in power; the entire saving of shingler's, or hammerman's wages, as no attendance whatever is necessary, it being entirely self-acting; saving in time from the quantity of work done, as one machine is capable of working the iron from sixty puddling furnaces; saving of waste, as nothing but the scoria is thrown off, and that most effectually; saving of staves, as none are used or required. The time required to furnish a bloom being only about six seconds, the scoria has no time to set, consequently is got rid of much easier than when allowed to congeal as under the hammer. The iron being discharged from the machine so hot, rolls better and is much easier on the rollers and machinery. The bars roll sounder, and are much better finished. The subscriber feels confident that persons who will examine for themselves the machinery in operation, will find it possesses more advantages than have been enumerated. For further particulars address the subscriber at Troy, N. Y.

P. A. BURDEN.

Railroad Spikes and Wrought Iron Fastenings.

THE TROY IRON AND NAIL FACTORY, exclusive owner of all Henry Burden's Patented Machinery for making Spikes, have facilities for manufacturing large quantities upon short notice, and of a quality unsurpassed.

Wrought Iron Chairs, Clamps, Keys and Bolts for Railroad fastenings, also made to order. A full assortment of Ship and Boat Spikes always on hand.

All orders addressed to the Agent at the Factory will receive immediate attention.

P. A. BURDEN, Agent,
Troy Iron and Nail Factory, Troy, N. Y.

CHILLED RAILROAD WHEELS.—THE UNDERSIGNED are now prepared to manufacture their Improved Corrugated Car Wheels, or Wheels with any form of spokes or discs, by a new process which prevents all strain on the metal, such as is produced in all other chilled wheels, by the manner of casting and cooling. By this new method of manufacture, the hubs of all kinds of wheels may be made whole—that is, without dividing them into sections—thus rendering the expense of banding unnecessary; and the wheels subjected to this process will be much stronger than those of the same size and weight, when made in the ordinary way.

A. WHITNEY & SON,
Willow St., below 13th,
Philadelphia, Pa.

Brown's Old Established SCALE WARE HOUSE,

NO. 234 WATER ST., NEW YORK.

THE Subscriber, Practical Manufacturer of Scales of every description, respectfully asks the attention of Railroad Companies to his Improved Wrought Iron Railroad Track and Depot Scales which for strength, durability, accuracy, convenience in weighing, and beauty of workmanship, are not surpassed by any others in this country.

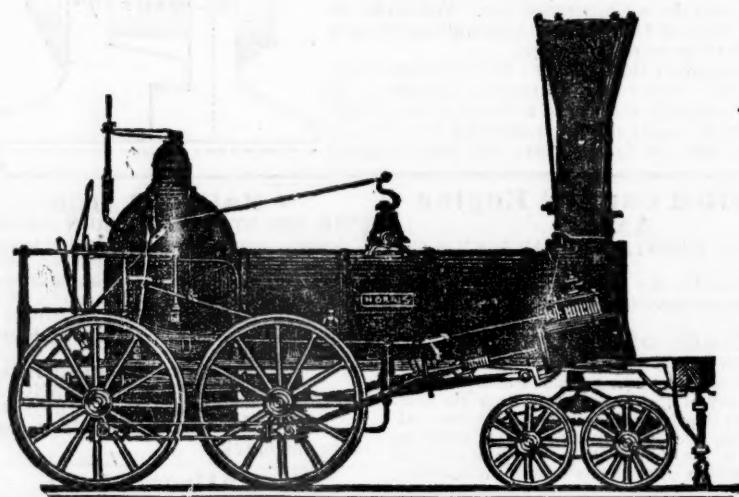
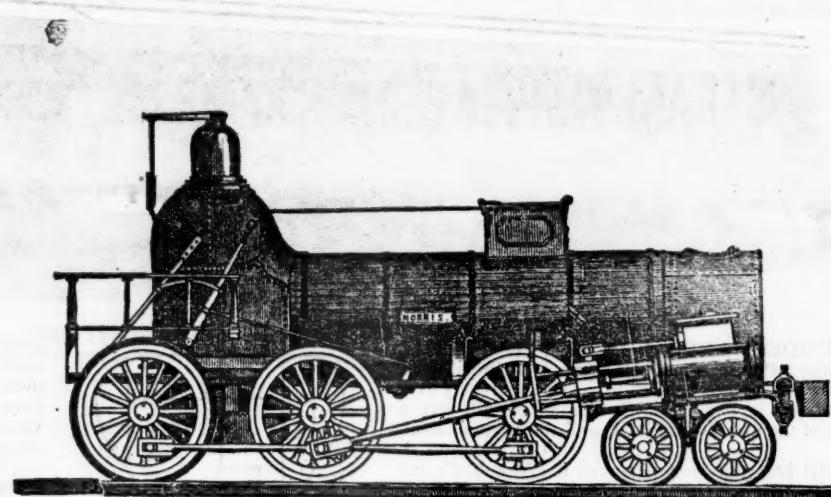
He is aware that this is rather a bold assertion for him to make, yet he can say with confidence that they have but to be tried to give them precedence over all others.

J. L. BROWN.
Bank Scales made to order, and all Scales of
his make Warranted in every particular.

Refer to written inquiries.

NORRIS' LOCOMOTIVE WORKS.

BUSHHILL, SCHUYLKILL SIXTH-ST., PHILADELPHIA,



THE UNDERSIGNED Manufacture to order Locomotive Steam Engines of any plan or size. Their shops being enlarged, and their arrangements considerably extended to facilitate the speedy execution of work in this branch, they can offer to Railway Companies unusual advantages for prompt delivery of Machinery of superior workmanship and finish.

Connected with the Locomotive business, they are also prepared to furnish, at short notice, Chilled Wheels for Cars of superior quality.

Wrought Iron Tyres made of any required size—the exact diameter of the Wheel Centre being given, the Tires are made to fit on same without the necessity of turning out inside. Iron and Brass castings, Axles, etc., fitted up complete with Trucks or otherwise.

NORRIS, BROTHERS

PATENT MACHINE MADE HORSE-SHOES.

The Troy Iron and Nail Factory have always on hand a general assortment of Horse Shoes, made from Refined American Iron.

Four sizes being made, it will be well for those ordering to remember that the size of the shoe increases as the numbers—No. 1 being the smallest.

P. A. BURDEN, Agent,
Troy Iron and Nail Factory, Troy, N. Y.

Etna Safety Fuse.

THIS superior article for igniting the charge in wet or dry blasting, made with DUPONT'S best powder, is kept for sale at the office and depot of

REYNOLDS & BROTHER,

Soe Manufacturers,

No. 88 Liberty St.

NEW YORK.

And in the principal cities and towns in the U. States.

The Premium of the AMERICAN INSTITUTE was awarded to the Etna Safety Fuse at the late Fair held in this city.

November 3, 1849.

ly

UNION WORKS,

North street, opposite the Railroad Depot,
BALTIMORE.

Pool & Hunt,

Manufacturers of Steam Engines and Mill Gearing, Machinists' Tools, and all kinds of heavy and light Machinery.

Also put up Arrangements of Wrought Iron Pipes for heating buildings and conveying steam or water.

Castings of every kind furnished at short notice. Every exertion will be made to insure the satisfaction of customers.

Patent Machine Picket Fence

SIX DIFFERENT STYLES of this fence are now made by patent machinery; and is by far the most economical fence for Railroads, Farms, Yards, etc., ever yet offered to the public, costing only from 4 to 30 cents per foot, according to pattern; and is so put up as to be shipped at a trifling expense. Full particulars will be furnished, by addressing the subscriber, to whom all orders should be sent.

N. STRATTON, Troy, N.Y.